UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Data Report for the 1983 Seismic-Refraction Experiment at Yucca Mountain, Beatty and Vicinity, Southwestern Nevada

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This report (map) is preliminary and has not been reviewed for conformity with U. S. Geological Survey editorial standards (and stratigraphic nomenclature). Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

1. USGS, Menlo Park, CA 94025

1984

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11. Record section- East-West Profile Shotpoint 19.

INTRODUCTION

In June 1983, the U. S. Geological Survey (USGS) conducted a seismic-refraction survey in the vicinity of Yucca Mountain and Beatty, Nevada to better define the P(compressional)-wave velocity structure of the upper crust in this area. This experiment is part of continuing seismic investigations in the region of the Nevada Test Site (NTS) by the USGS to aid in determining the feasibility of the proposed nuclear waste disposal site at Yucca Mountain.

The 1983 seismic-refraction survey consisted of ten individual explosions at nine shotpoints, recorded by two deployments of 120 portable seismographs constituting North-South and East-West profiles (Plate 1). The North-South profile extended 45 kilometers along the western flank of Yucca Mountain. Recorder station spacing averaged .40 km, and seven shots spaced 8 km apart were fired. The East-West profile extended 60 km from Yucca Mountain west through Fluorspar Canyon and Titus Canyon to the floor of Death Valley, California. Recorder station spacing averaged .40 to .60 km and three shots were fired at Yucca Mountain, near Beatty, and at the Death Valley boundary.

This report includes record sections from the ten shotpoints (Plates 2-11), a list of seismograph locations (Appendix A), a list of shotpoint locations and shot times, DKDAT data files and Tape Grade Code (Appendix B), and a list of first-arrival traveltime picks (Appendix C). Detailed interpretation of these data will be published in a subsequent report.

ACKNOWLEDGMENTS

I wish to thank T. Conway for her diligent assistance in surveying, calculating, and field-checking the site locations, and for deploying seismic recorders. I also wish to thank the field crew: G. Bloomberg, M. Burns, B. Colburn, E. Criley, B. Echols, L. Greene, W. Mooney, P. Meador, J. Murphy, L. Pace, and D. Synder.

SURVEYING SEISMIC-RECORDER AND SHOTPOINT SITES

Prior to deployment of the seismic recorders, recording sites were staked and surveyed using a Hewlett-Packard Electronic Distance Meter* (model HP3820), which employs a laser and reflectors. The laser was positioned at various points along the profiles, and reflectors were positioned at the seismic recorder sites, benchmarks, road intersections, and other features distinguishable on topographic and orthophoto maps. Digital readings of horizontal and vertical distances and azimuths from the laser to each reflector were recorded in field notes. Locations of the recorder sites were calculated by the triangulation from known points (benchmarks and road intersections).

All locations were field-checked after the experiments using Brunton compass readings, vehicle mileage, and pacing. Most locations are estimated to be accurate within 20 m. The maximum estimated error is 50 m.

> NOTE: Seismic recorder locations 792-820 and shotpoint locations 11 and 18 were not laser-sited, but located with 1:62500 scale topographical and 1:24000 scale orthophoto maps.

SHOTPOINTS AND SEISMIC RECORDERS

Shotpoints were sited along the two profiles in as straight a line and with as even a spacing as possible, given the limitations of mobilizing a drilling rig. Typically, shotholes were drilled 36 meters deep (20 cm diameter), then loaded with 900 kilograms of high-velocity ammonium nitrate explosive, tamped to the surface with gravel and fired automatically according to clock time (Healy, et al, 1982).

The explosions were recorded by 120 portable seismic cassette-tape recorders. Each recorder contains a single vertical-component 2-Hz geophone, chronometer, calibrator, tape deck, tape-speed-compensation tone generator, three independent amplifiers commonly set 18 dB apart in gain (a factor of 8), and a WWVB radio receiver (Fig. 1). The system response peaks at about 20 Hz (Fig. 2).

The internal chronometers in the 120 instruments are synchronized to Greenwich Mean Time (GMT) the day prior to deployment and programmed for a maximum of ten recording times using a device called a Hand Held Tester (HHT; Healy et al, 1982). After the shots are fired, the instruments are picked up, chronometer drifts recorded, and tapes removed.

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* The use of trade names is for descriptive purposes only and does not constitute endorsement by the USGS.

DATA PROCESSING AND PICKING FIRST-ARRIVAL TIMES

The data is converted from analog to digital formats via microprocessor systems (Fig. 3). The analog data from the cassette tapes is digitized at a rate of 200 samples/sec. Twenty seconds of data are digitized for each shot and each instrument spanning the time of the expected arrival. Time zero on each trace is calculated to be the shot-instrument spacing divided by 6 km/s; and the trace is digitized for -2 s to 18 s to the maximum peak-to-peak amplitude in whatever interval is plotted. In this report we plot the interval 0-4 seconds for each station (Plates 2-11). Record sections are plotted with maximum trace amplitudes normalized to a common value. Negative distances on the horizontal axis on the record sections indicate positions north of the shotpoints on the North-South profile and west of the shotpoints on the East-West profile (Plates 2-11).

First-arrival travel times were picked from the record sections using cross-hairs displayed on a computer graphics terminal (Appendix C). Weights were assigned for first-arrival times as follows:

0 - Excellent

1 - Good

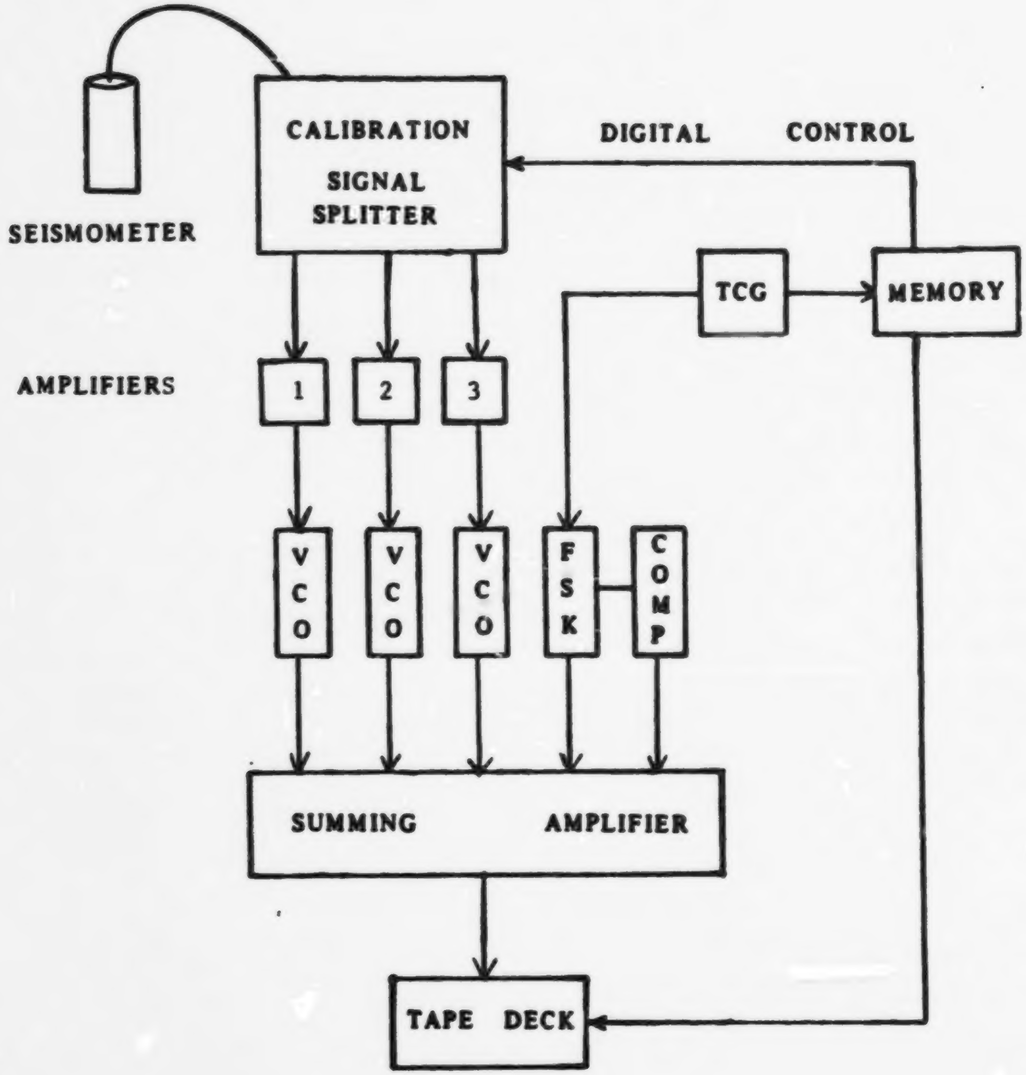
2 - Fair

3 - Weak or Noisy

4 - Poor or highly emergent

REFERENCE

Healy, J. H., Mooney, W. D., Blank, H. R., Gettings, M. E., Kohler, W. M., Lamson, R. J., and Leone, L. E., 1982, Saudi Arabian Seismic Deep-Refraction Profile: Final Project Report. U S Geological Survey Open-File Report 02-37, 432 pp.



COMP = TAPE SPEED TONE GENERATOR
FSK = FREQUENCY SHIFT KEYING
TCG = TIME CODE GENERATOR
VCO = VOLTAGE-CONTROLLED OSCILLATOR

Figure 1 .--Schematic diagram of a recording unit.

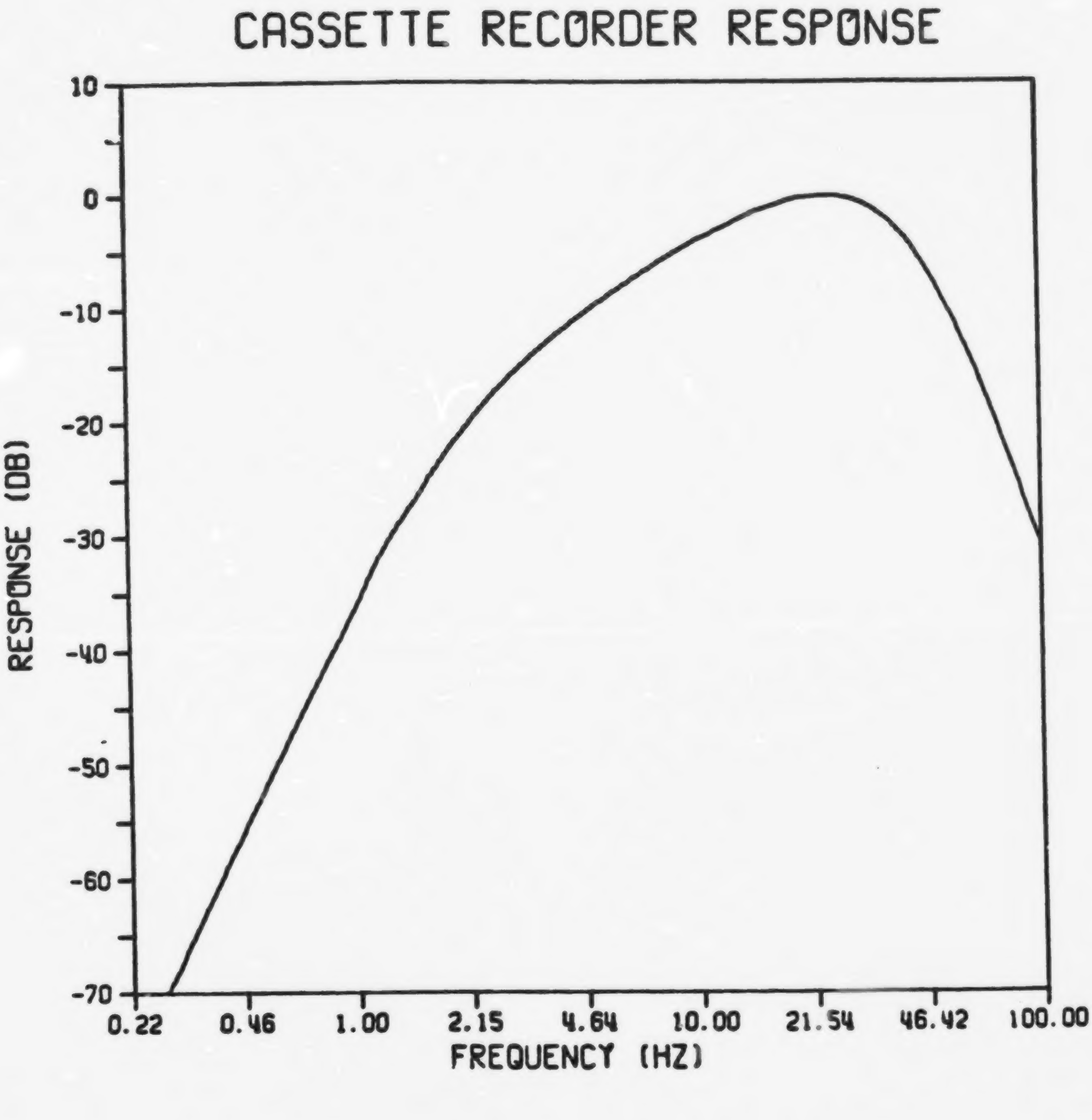


Figure 2.--System Response Curve for Seismic Recording Units.

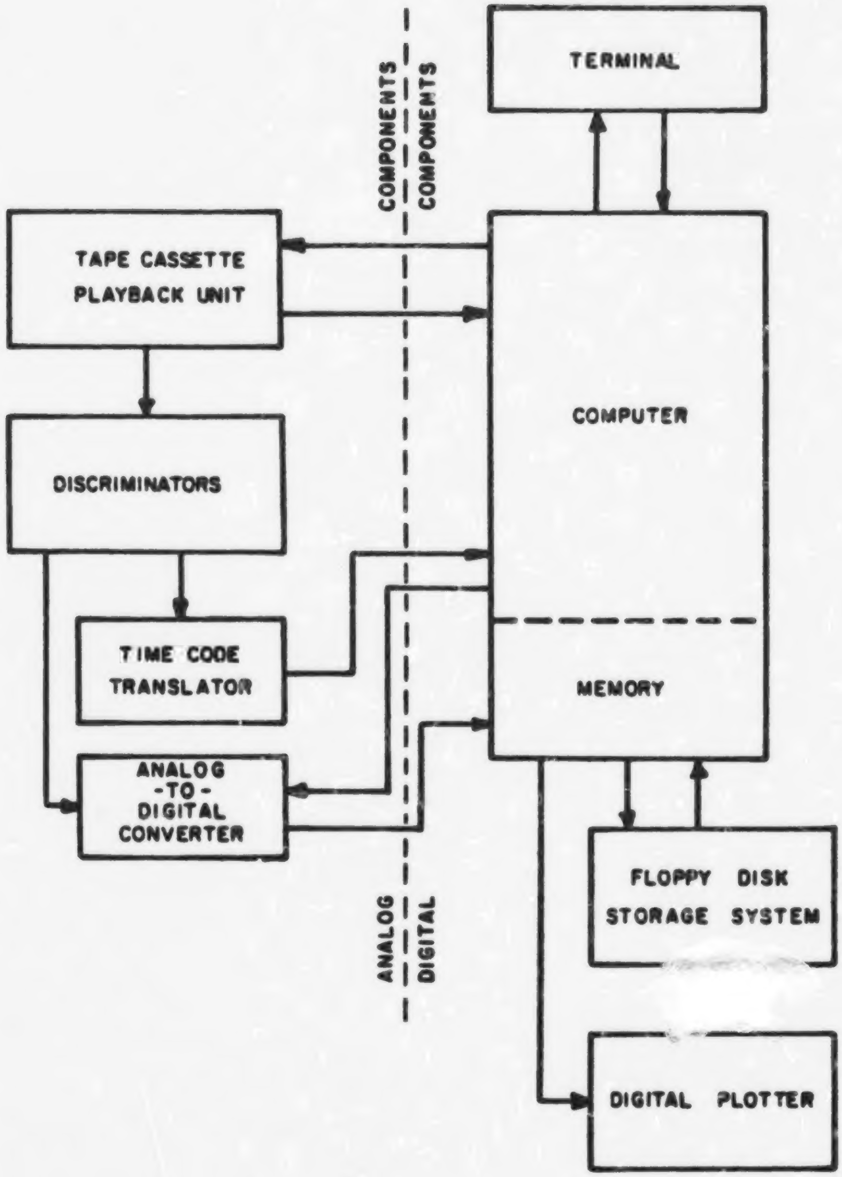


Figure 3 .--Schematic diagram of seismic data processing system showing control and data lines.

APPENDIX A

SEISMOGRAPH LOCATIONS

Location Number of each recorder site on the map corresponds to the Location Number above each seismogram on the record sections (Plates 2-11). Latitudes (North), longitudes (East), and elevations (ft) are listed for each seismograph location number.

U.S.G.S. SEISMIC RECORDER LOCATIONS

NEVADA 1983

LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV
701	36 55 20.6	116 33 39.0	4215
702	36 55 30.8	116 33 48.7	4200
703	36 55 38.9	116 33 59.0	4240
704	36 55 47.2	116 34 10.2	4240
705	36 55 56.5	116 34 21.5	4250
706	36 56 0.9	116 34 36.5	4220
707	36 56 2.1	116 34 52.0	4200
708	36 56 2.9	116 35 7.0	4160
709	36 55 59.4	116 35 20.9	4160
710	36 55 55.8	116 35 35.9	4160
711	36 55 59.8	116 35 50.5	4100
712	36 56 0.4	116 36 6.1	4100
713	36 55 57.0	116 36 22.9	4100
714	36 55 55.0	116 36 36.9	4080
715	36 55 53.6	116 36 52.8	4050
716	36 55 51.8	116 37 8.6	4020
717	36 55 47.3	116 37 24.7	4000
718	36 55 41.6	116 37 37.7	3980
719	36 55 42.6	116 37 53.2	3980
720	36 55 39.5	116 38 8.5	4000
721	36 55 33.7	116 38 22.9	4000
722	36 55 26.8	116 38 33.9	4032
723	36 55 14.5	116 38 35.8	4000
724	36 55 4.0	116 38 45.8	4000
725	36 54 55.3	116 38 56.0	4050
726	36 54 45.4	116 39 4.7	4100
727	36 54 34.3	116 39 11.5	4100
728	36 54 25.2	116 39 21.9	4167
729	36 54 18.7	116 39 35.8	4240
730	36 54 13.2	116 39 50.8	4280
731	36 54 2.6	116 40 1.7	4350
732	36 53 52.5	116 40 10.2	4400
733	36 53 42.0	116 40 19.9	4450
734	36 53 32.7	116 40 27.8	4500
735	36 53 24.7	116 40 40.9	4533
736	36 53 24.5	116 40 58.6	4374
737	36 53 21.0	116 41 9.7	4350
738	36 53 16.3	116 41 25.1	4280
739	36 53 11.3	116 41 39.7	4220
740	36 53 18.7	116 41 57.8	4180
741	36 53 21.8	116 42 13.6	4120
742	36 53 33.8	116 42 32.4	4060
743	36 53 41.6	116 42 47.0	3900
744	36 53 45.5	116 43 1.6	3800
745	36 53 45.5	116 43 17.6	3650
746	36 53 42.5	116 43 33.2	3650
747	36 53 40.0	116 43 49.3	3560
748	36 53 37.5	116 44 5.2	3480
749	36 53 34.5	116 44 21.0	3400
750	36 53 32.0	116 44 36.8	3360

U.S.G.S. SEISMIC RECORDER LOCATIONS

NEVADA 1983

LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV
751	36 53 29.5	116 44 52.7	3240
752	36 52 56.9	116 45 25.9	3200
753	36 53 3.1	116 45 37.1	3240
754	36 53 6.4	116 45 56.1	3280
755	36 53 4.1	116 46 14.0	3370
756	36 52 57.3	116 46 28.4	3360
757	36 52 54.5	116 46 39.6	3340
758	36 52 57.2	116 46 56.2	3300
759	36 53 2.6	116 47 9.1	3300
760	36 53 2.2	116 47 28.6	3300
761	36 53 9.6	116 47 37.9	3340
762	36 53 12.4	116 47 53.5	3340
763	36 53 16.4	116 48 10.7	3350
764	36 53 22.4	116 48 21.4	3360
765	36 53 9.7	116 48 37.3	3400
766	36 53 6.7	116 48 57.0	3400
767	36 53 11.7	116 49 12.0	3440
768	36 53 17.5	116 49 25.9	3500
769	36 53 24.1	116 49 40.6	3550
770	36 53 24.6	116 49 56.2	3600
771	36 53 22.2	116 50 11.9	3620
772	36 53 18.7	116 50 27.4	3630
773	36 53 19.3	116 50 43.3	3640
774	36 53 21.5	116 50 59.4	3650
775	36 53 22.9	116 51 14.4	3670
776	36 53 24.5	116 51 30.1	3690
777	36 53 26.9	116 51 46.1	3800
778	36 53 28.7	116 52 1.4	3800
779	36 53 32.6	116 52 16.5	3820
780	36 53 35.4	116 52 30.7	3850
781	36 53 37.9	116 52 57.1	3850
782	36 53 39.4	116 53 13.0	3870
783	36 53 39.6	116 53 29.3	3890
784	36 53 33.5	116 53 43.3	3960
785	36 53 36.2	116 53 58.2	3990
786	36 53 40.7	116 54 13.4	4010
787	36 53 44.3	116 54 28.5	4050
788	36 53 46.3	116 54 43.3	4100
789	36 53 54.5	116 54 55.8	4200
790	36 53 57.9	116 55 12.5	4240
791	36 53 58.8	116 55 29.3	4260
792	36 53 48.6	116 55 41.1	4240
793	36 50 54.3	116 55 22.5	3850
794	36 50 50.3	116 55 56.6	4000
795	36 50 50.1	116 56 32.1	4050
796	36 50 52.1	116 57 0.6	4200
797	36 50 1[illegible].0	116 57 35.7	4400
798	36 49 59.2	116 57 59.9	4400
799	36 49 33.7	116 58 40.3	4700
800	36 49 29.6	116 59 14.1	4900

U.S.G.S. SEISMIC RECORDER LOCATIONS

NEVADA 1983

LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV
801	36 49 36.3	117 0 0.0	5100
802	36 49 49.7	117 0 37.2	5100
803	36 49 37.3	117 1 19.8	4000
804	36 50 3.2	117 1 54.6	5000
805	36 50 19.7	117 2 37.5	4500
806	36 50 49.7	117 3 24.6	4200
807	36 51 4.7	117 4 17.9	3600
808	36 50 41.2	117 4 46.4	3400
809	36 50 27.8	117 5 24.3	3200
810	36 49 58.0	117 6 6.9	2800
811	36 49 41.8	117 6 37.0	2700
812	36 49 42.4	117 7 14.8	2400
813	36 49 28.6	117 7 48.1	2100
814	36 49 20.5	117 8 20.1	1800
815	36 49 10.6	117 8 50.1	1600
816	36 49 21.5	117 9 32.3	1300
817	36 49 23.2	117 10 17.5	1100
818	36 48 44.0	117 10 50.4	650
819	36 48 14.6	117 11 11.8	400
820	36 48 45.6	117 12 38.8	308
902	36 55 33.5	116 33 29.9	
903	36 55 44.8	116 33 23.5	4360
904	36 55 53.8	116 33 12.5	4400
905	36 59 48.9	116 35 8.1	4240
906	36 59 51.9	116 35 3.0	4240
907	36 55 9.6	116 33 41.3	4200
908	36 54 57.4	116 33 39.1	4140
909	36 54 44.9	116 33 42.9	4060
910	36 54 32.6	116 33 47.8	4000
911	36 54 20.2	116 33 51.0	3960
912	36 54 7.7	116 33 55.3	3920
913	36 53 55.3	116 33 59.3	3880
914	36 53 42.9	116 34 3.1	3840
915	36 53 30.4	116 34 6.4	3880
916	36 53 17.9	116 34 10.3	3750
917	36 53 5.4	116 34 13.9	3720
918	36 52 52.3	116 34 17.8	3680
919	36 52 40.4	116 34 22.1	3640
920	36 52 28.0	116 34 25.1	3600
921	36 51 51.8	116 33 44.5	3640
922	36 51 59.9	116 33 31.7	3680
923	36 52 7.7	116 33 19.7	3730
924	36 52 13.6	116 33 5.2	3780
925	36 52 16.5	116 32 47.0	3820
926	36 52 22.4	116 32 33.0	3860
927	36 52 32.3	116 32 23.8	3920
928	36 52 44.5	116 32 19.2	3960
929	36 52 56.6	116 32 16.6	4000
930	36 53 8.4	116 32 12.7	4030
931	36 53 17.5	116 32 2.3	4070

U.S.G.S. SEISMIC RECORDER LOCATIONS

NEVADA 1983

LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV
932	36 53 27.5	116 31 53.0	4100
933	36 52 8.8	116 31 58.2	3800
934	36 51 56.7	116 32 2.7	3800
935	36 51 44.2	116 32 5.9	3780
936	36 51 31.7	116 32 8.7	3740
937	36 51 18.9	116 32 9.8	3700
938	36 51 6.3	116 32 11.6	3660
939	36 50 52.4	116 32 13.3	3620
940	36 50 42.1	116 32 17.0	3600
941	36 50 25.0	116 32 20.4	3600
942	36 50 13.1	116 32 23.6	3590
943	36 50 0.6	116 32 27.0	3560
944	36 49 47.9	116 32 29.9	3520
945	36 49 35.5	116 32 31.9	3480
946	36 49 23.1	116 32 34.6	3480
947	36 49 10.3	116 32 35.2	3420
948	36 48 58.2	116 32 30.6	3400
949	36 48 47.2	116 32 23.2	3400
950	36 48 35.1	116 32 18.0	3380
951	36 48 26.5	116 32 7.6	3400
952	36 48 16.4	116 31 57.9	3360
953	36 48 9.5	116 31 53.0	3360
954	36 47 59.1	116 31 44.9	3360
955	36 47 46.1	116 31 35.5	3360
956	36 47 31.9	116 31 27.2	3350
957	36 47 21.5	116 31 18.5	3320
958	36 47 11.6	116 31 7.9	3280
959	36 47 1.4	116 30 58.7	3280
960	36 46 50.9	116 30 49.6	3270
961	36 46 41.0	116 30 40.1	3250
962	36 46 29.6	116 30 32.8	3200
963	36 46 17.6	116 30 28.3	3200
964	36 46 5.0	116 30 30.7	3160
965	36 45 52.3	116 30 31.9	3120
966	36 45 40.0	116 30 35.4	3080
967	36 45 27.2	116 30 37.3	3040
968	36 45 14.8	116 30 39.2	3000
969	36 45 1.6	116 30 40.4	2980
970	36 44 48.8	116 30 41.6	2960
971	36 44 38.2	116 30 42.8	2960
972	36 44 31.3	116 30 17.0	3120
973	36 44 23.0	116 30 15.5	3080
974	36 44 11.3	116 30 19.5	3000
975	36 44 0.4	116 30 26.7	3000
976	36 43 50.0	116 30 34.6	3000
977	36 43 40.1	116 30 37.3	3000
978	36 43 28.1	116 30 37.1	2980
979	36 43 16.4	116 30 43.3	2960
980	36 43 4.9	116 30 48.0	2920
981	36 42 54.4	116 30 49.9	2900

U.S.G.S. SEISMIC RECORDER LOCATIONS

NEVADA 1983

LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV
982	36 42 41.2	116 30 47.3	2880
983	36 42 30.1	116 30 52.1	2860
984	36 42 17.5	116 30 53.4	2840
985	36 42 5.4	116 30 54.8	2840
986	36 41 52.9	116 30 56.0	2800
987	36 41 40.9	116 30 58.3	2800
988	36 41 29.5	116 30 52.0	2760
989	36 41 18.5	116 30 45.7	2720
990	36 41 6.8	116 30 43.0	2680
991	36 40 54.5	116 30 38.9	2640
992	36 40 41.7	116 30 39.9	2600
993	36 40 29.0	116 30 39.8	2560
994	36 40 16.6	116 30 35.8	2560
995	36 39 56.4	116 30 23.2	2540
996	36 39 44.0	116 30 19.3	2540
997	36 39 31.1	116 30 19.4	2540
998	36 39 19.7	116 30 19.6	2540
999	36 39 7.0	116 30 19.7	2540
1000	36 38 54.0	116 30 19.5	2540
1001	36 38 41.5	116 30 19.6	2540
1002	36 38 28.6	116 30 19.4	2520
1003	36 38 15.7	116 30 19.4	2520
1004	36 38 2.0	116 30 19.5	2500
1005	36 37 50.0	116 30 19.4	2500
1006	36 37 35.9	116 30 19.5	2480
1007	36 37 24.2	116 30 19.3	2480
1008	36 37 11.5	116 30 19.4	2480
1009	36 36 58.6	116 30 19.5	2480
1010	36 36 45.1	116 30 19.4	2460
1011	36 36 32.9	116 30 19.7	2460
1012	36 36 19.9	116 30 19.4	2450
1013	36 36 7.3	116 30 19.2	2440
1014	36 35 51.2	116 30 19.6	2442
1015	36 35 40.1	116 30 19.6	2440
1016	36 35 26.0	116 30 19.4	2440
1017	36 35 13.7	116 30 19.5	2440
1018	36 34 59.1	116 30 19.7	2440
1019	36 30 19.3	116 29 4.0	2300
1020	36 30 6.5	116 29 3.7	2300

APPENDIX B

SHOT LOCATIONS AND TIMES (p 16), TAPE-GRADE CODE (p 17), and DKDAT data files (pp 18-47).

SHOT LOCATIONS AND TIMES

Shots are listed in the order that they were fired (Shot Number). Shotpoint Numbers correspond to numbers plotted on the map (Plate 1). Shot time includes the Julian Day (D), hour, minute, and second (H, M, S) in Greenwich Mean Time (GMT).

TAPE-GRADE CODE

A number is assigned to each cassette tape as it is digitized. These codes appear in the last column of the DKDAT data file.

DKDAT data file

DKDAT data file is organized by team-shots, and listed in the order of shots fired (Shot Number). A team-shot is twenty recordings of each shot accomplished by each of six teams. Header information for each team-shot includes team numbers, shot numbers, shotpoint numbers, and shot times. Columnized information includes station location numbers (LOC), distance from the shots (DIST; in km), azimuths (AZIM; in degrees from North), unit numbers (UNIT), chronometer corrections (CHRON; in milliseconds; these subtracted from chronometer readings during digitization), channel digitized and gain settings of the three channels (C1, C2, C3), and tape grade codes.

SHOT LOCATIONS AND TIMES

NEVADA 1983

		SHOT	LATITUDE	LONGITUDE	SHOT TIME			
	DATE	POINT	(East)	(North)	DAY	HR	MN	SEC
1.	June 2, 1983	12	36 55.3008	116 33.7166	154	04	30	0.017
2.	June 2, 1983	19	36 53.3855	116 52.6653	154	04	45	0.012
3.	June 2, 1983	18	36 53.7675	116 43.8597	154	05	00	0.009
4.	June 5, 1983	11	36 59.8826	116 35.1045	157	02	00	0.011
5.	June 5, 1983	13	36 52.2469	116 33.0656	157	02	15	0.007
6.	June 5, 1983	17	36 35.0539	116 30.2779	157	04	30	0.010
7.	June 5, 1983	15	36 44.6429	116 30.6290	157	05	30	0.012
8.	June 5, 1983	12	36 55.3308	116 33.7166	157	06	15	0.008
9.	June 5, 1983	16	36 39.3521	116 30.3236	157	06	30	0.009
10.	June 5. 1983	14	36 48.1865	116 31.9221	157	08	30	0.005

TAPE GRADE CODE

0 - GOOD
1 - TAPE DID NOT RUN
2 - TAPE RAN BUT NO SIGNAL
3 - TAPE SKIPPED RECORD TIME
4 - TAPE RAN FAST FORWARD; NO SIGNAL
5 - TAPE REWOUND AND ERASED
6 - WEAK SIGNAL; CANNOT READ TIME CODE; LOW RECORD LEVEL
7 - NOISE, CONTINUOUS CALIBRATION OR PERIODIC OFFSETS
8 - NOISE, SINUSOIDAL
9 - NOISE, SPIKE
10 - NOISE, WWVB CROSS-FEED
11 - NOISE, PERIODIC TICKS
12 - NOISE, RANDOM
13 - BAD CLOCK
14 - OFF FREQUENCY, TAPE SPEED PROBLEM?
16 - INCOMPLETE RECORD; RECORDER STOPPED
17 - NOISY OR WEAK TIME CODE
19 - TURNED ON TOO EARLY
20 - IN FOR REPAIR; NOT DEPLOYED
21 - GEOPHONE DISCONNECTED OR SHORTED (?)
22 - WRONG UNIT NUMBER
23 - WRONG GAIN SETTINGS
24 - TURNED ON TOO LATE
25 - BAD GEOPHONE TEST
26 - ONE OR MORE CHANNELS MISSING
27 - NOISY OR WEAK WWVB
28 - INST OR TAPE DAMAGED IN FIELD
29 - WRONG TIME DURING TURN-ON
30 - DIGITIZED WITHOUT CALIBRATION
31 - AMPLIFIER OUT OF BALANCE
32 - LOCATION NOT ON MAP; WRONG LOCATION

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 1 TEAM 1
SHOT POINT 12
SHOT TIME: 154: 4:30: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	801	40.453	254.9	1	-18	2	24	6	42	0
2	802	41.239	255.8	2	-15		24	6	42	2
3	803	42.357	255.6	3	7	2	24	6	42	0
4	804	43.003	257.0	4	-114	2	24	6	42	0
5	805	43.928	257.9	5	34		24	6	42	21
6	806	44.889	259.4	6	5	2	24	6	42	0/21
7	807	46.103	260.2	7	-15	2	24	6	42	0
8	808	46.928	259.5	8	47	2	24	6	42	0/21
9	809	47.927	259.2	9	8	2	24	6	42	0
10	810	49.144	258.4	10	-4	2	24	6	42	0
11	811	49.975	258.0	11	34	2	24	6	42	0
12	812	50.888	258.3	12	3	2	24	6	42	0
13	813	51.784	258.0	13	1	2	24	6	42	0
14	814	52.613	257.9	14	40	2	24	6	42	0
15	815	53.405	257.8	15	-2	2	24	6	42	0
16	816	54.354	258.3	16	17	2	24	6	42	0
17	817	55.443	258.6	17	26	2	24	6	42	0
18	818	56.491	257.6	18	1	2	24	6	42	0
19	819	57.213	256.8	19	35	2	24	6	42	0
20	820	59.107	258.2	20	-12	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 1 TEAM 2
SHOT POINT 12
SHOT TIME: 154: 4:30: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	721	6.945	274.0	21	-6	3	24	6	42	0
2	722	7.205	272.2	22	9	3	24	6	42	0
3	723	7.249	269.1	23	15	3	24	6	42	0
4	724	7.508	266.7	24	-40		24	6	42	1
5	725	7.779	264.8	25	4	3	24	6	42	0
6	726	8.027	262.8	26	3	3	24	6	42	0
7	727	8.243	260.6	27	-5	3	24	6	42	0
8	728	8.546	259.0	28	11	1	24	6	42	0
9	729	8.922	258.2	29	9	1	24	6	42	0
10	730	9.321	257.6	30	4	1	24	6	42	0
11	731	9.658	256.1	31	7	1	24	6	42	0
12	732	9.942	254.6	32	--		24	6	42	1
13	733	10.262	253.2	33	--		24	6	42	1
14	734	10.536	252.0	34	5	1	24	6	42	0
15	735	10.921	251.3	35	-31	1	24	6	42	0
16	736	11.337	252.0	36	-5	1	24	6	42	0
17	737	11.633	251.9	37	15		24	6	42	2
18	738	12.039	251.8	38	--		24	6	42	1
19	739	12.432	251.7	39	3	1	24	6	42	0
20	740	12.791	253.3	40	--		24	6	42	1

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   1   TEAM 3
SHOT POINT 12
SHOT TIME: 154: 4:30: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	741	13.138	254.2	41	4		24	6	82	25
2	742	13.493	256.2	42	3	1	24	6	42	0
3	743	13.793	257.6	43	-18	1	24	6	42	0
4	744	14.120	258.3	44	-23	1	24	6	42	0
5	745	14.509	258.7	45	1	1	24	6	42	0
6	746	14.906	258.6	46	-52	1	24	6	42	0
7	747	15.311	258.6	47	37		24	6	42	12
8	748	15.711	258.6	48	-38		24	6	42	1
9	749	16.114	258.6	49	4	1	24	6	42	0
10	750	16.513	258.6	50	5	1	24	6	42	0
11	751	16.913	258.6	51	10	1	24	6	42	12
12	752	17.939	256.0	52	-14	1	24	6	42	0
13	753	18.162	256.8	53	2		24	6	42	21
14	754	18.598	257.4	54	-15	2	24	6	42	0
15	755	19.047	257.5	55	-12		24	6	42	2
16	756	19.440	257.1	56	-3	1	24	6	42	0
17	757	19.729	257.0	57	-46	1	24	6	42	0
18	758	20.113	257.5	58	-5	1	24	6	42	0
19	759	20.390	258.2	59	-3	1	24	6	42	12
20	760	20.865	258.4	60	-7	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   1   TEAM 4
SHOT POINT 12
SHOT TIME: 154: 4:30: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	761	21.044	259.2	61	6	1	24	6	42	0
2	762	21.410	259.6	62	5		24	6	42	2
3	763	21.806	260.1	63	4	1	24	6	42	0
4	764	22.035	260.7	64	--		24	6	42	1
5	765	22.492	259.9	65	0	1	24	6	42	0
6	766	22.988	259.9	66	-4	1	24	6	42	0
7	767	23.328	260.4	67	-7	1	24	6	42	0
8	768	23.637	261.0	68	-7	2	36	6	42	0
9	769	23.965	261.6	69	3	1	24	6	42	0
10	770	24.345	261.7	70	12	1	24	6	42	0
11	771	24.741	261.7	71	-6	1	24	6	42	0
12	772	25.136	261.6	72	7	1	24	6	42	0
13	773	25.523	261.8	73	-2		24	6	42	1
14	774	25.907	262.0	74	-4	1	24	6	42	0
15	775	26.270	262.2	75	6	1	24	6	42	0
16	776	26.649	262.5	76	0	1	24	6	42	0
17	777	27.031	262.7	77	0	1	24	6	42	0
18	778	27.402	262.9	78	3	1	24	6	42	0
19	779	27.758	263.3	79	5	1	24	6	42	0
20	780	28.097	263.5	80	6	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   1   TEAM 5
SHOT POINT 12
SHOT TIME: 154: 4:30: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	781	28.738	263.8	81	-23	2	24	6	82	0
2	782	29.124	264.0	82	-8	2	24	6	82	0
3	783	29.525	264.1	83	13	2	24	6	82	0
4	784	29.888	263.8	84	12	2	24	6	82	0
5	785	30.247	264.0	85	-38	2	24	6	82	0
6	786	30.608	264.4	86	-55	2	24	6	82	0
7	787	30.968	264.6	87	9	2	24	6	82	0
8	788	31.328	264.8	88	20	1	24	6	42	0
9	789	31.614	265.3	89	10	1	24	6	42	0
10	790	32.016	265.6	90	5	2	24	6	42	0
11	791	32.430	265.7	91	5	2	24	6	42	0
12	792	32.747	265.2	92	6		24	6	42	25
13	793	33.191	255.8	93	-6	1	24	6	42	0
14	794	34.040	256.0	94	10	1	24	6	42	0
15	795	34.897	256.3	95	22	1	24	6	42	0
16	796	35.568	256.7	96	-25	1	24	6	42	0
17	797	36.699	255.2	97	6	2	24	6	42	0
18	798	37.397	254.8	98	9	2	24	6	42	0
19	799	38.573	254.0	99	8	2	24	6	42	0
20	800	39.413	254.2	100	7	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   1   TEAM 6
SHOT POINT 12
SHOT TIME: 154: 4:30: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	0.126	51.5	101	15	3	24	6	82	0
2	702	0.419	340.2	102	--		24	6	82	1
3	703	0.755	328.2	103	4	3	24	6	82	0
4	704	1.123	323.2	104	0	3	24	6	82	0
5	705	1.520	321.1	105	15	1	24	6	82	0
6	706	1.871	314.9	106	-9		24	6	82	20
7	707	2.182	308.5	107	-37		24	6	82	21
8	708	2.497	303.7	108	9	1	24	6	82	0
9	709	2.738	297.7	109	3	3	24	6	42	0
10	710	3.024	292.6	110	18	3	24	6	42	0
11	711	3.408	292.2	111	15		24	6	42	21
12	712	3.775	290.2	112	-2		24	6	42	21
13	713	4.135	286.9	113	-6		24	6	42	21
14	714	4.452	284.8	114	-3	3	24	6	42	0
15	715	4.823	283.1	115	0		24	6	42	21
16	716	5.196	281.6	116	9	3	24	6	42	0
17	717	5.560	279.3	117	4	3	24	6	42	0
18	718	5.854	277.1	118	5	3	24	6	42	0
19	719	6.240	277.0	119	0	3	24	6	42	0
20	720	6.603	275.7	120	-4	3	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   2   TEAM 1
SHOT POINT 19
SHOT TIME: 154: 4:45: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	801	12.951	237.3	1	-18	1	24	6	42	0
2	802	13.530	240.9	2	-16		24	6	42	21
3	803	14.640	241.6	3	7	1	24	6	42	0
4	804	15.059	245.8	4	-116	1	24	6	42	0
5	805	15.846	249.1	5	34	1	24	6	42	0
6	806	16.655	253.5	6	5		24	6	42	21
7	807	17.806	256.1	7	-15	1	24	6	42	0
8	808	18.674	254.5	8	48		24	6	42	21
9	809	19.690	254.1	9	8	2	24	6	42	0
10	810	20.967	252.4	10	-4	1	24	6	42	0
11	811	21.829	251.8	11	34	1	24	6	42	0
12	812	22.715	252.6	12	3	1	24	6	42	0
13	813	23.631	252.2	13	1	1	24	6	42	0
14	814	24.463	252.2	14	41	1	24	6	42	0
15	815	25.265	252.1	15	-2	1	24	6	42	0
16	816	26.161	253.5	16	17	1	24	6	42	0
17	817	27.224	254.2	17	27	2	24	6	42	0
18	818	28.352	252.3	18	1	2	24	6	42	0
19	819	29.143	251.0	19	35	2	24	6	42	0
20	820	30.909	253.9	20	-12	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   2   TEAM 2
SHOT POINT 19
SHOT TIME: 154: 4:45: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	721	21.594	79.3	21	-6	1	24	6	42	0
2	722	21.289	79.7	22	9	1	24	6	42	0
3	723	21.177	80.7	23	16	2	24	6	42	0
4	724	20.882	81.4	24	-40		24	6	42	1
5	725	20.595	82.1	25	5	2	24	6	42	0
6	726	20.341	82.8	26	3	1	24	6	42	0
7	727	20.135	83.7	27	-5	2	24	6	42	0
8	728	19.851	84.5	28	11	2	24	6	42	0
9	729	19.490	85.0	29	9	2	24	6	42	0
10	730	19.106	85.4	30	4	2	24	6	42	0
11	731	18.814	86.3	31	7	2	24	6	42	0
12	732	18.585	87.2	32	--		24	6	42	1
13	733	18.333	88.2	33	--		24	6	42	1
14	734	18.130	89.1	34	5		24	6	42	2
15	735	17.803	89.8	35	-31	1	24	6	42	0
16	736	17.366	89.9	36		1	24	6	42	0
17	737	17.090	90.2	37	6		24	6	42	2
18	738	16.712	90.7	38			24	6	42	1
19	739	16.353	91.3	39	3	1	24	6	42	0
20	740	15.899	90.5	40	--		24	6	42	1

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   2   TEAM 3
SHOT POINT 19
SHOT TIME: 154: 4:45: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	741	15.510	90.2	41	4	2	24	6	82	21
2	742	15.047	88.7	42	3	1	24	6	42	0
3	743	14.691	87.8	43	-18	1	24	6	42	0
4	744	14.336	87.2	44	-23	1	24	6	42	0
5	745	13.940	87.2	45	1	1	24	6	42	0
6	746	13.549	87.5	46	-53	1	24	6	42	0
7	747	13.148	87.7	47	37		24	6	42	12
8	748	12.754	88.0	48	-38		24	6	42	1
9	749	12.359	88.4	49	4	1	24	6	42	0
10	750	11.965	88.7	50	6	1	24	6	42	0
11	751	11.571	89.0	51	10	1	24	6	42	0
12	752	10.777	94.3	52	-14	1	24	6	42	0
13	753	10.489	93.4	53	3	2	24	6	42	0
14	754	10.013	93.0	54	-15	2	24	6	42	0
15	755	9.573	93.5	55	-12		24	6	42	2
16	756	9.235	94.9	56	-3	1	24	6	42	0
17	757	8.966	95.6	57	-46	3	24	6	42	0
18	758	8.548	95.4	58	-5	3	24	6	42	0
19	759	8.215	94.4	59	-4	3	24	6	42	0
20	760	7.735	94.8	60	-7	3	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   2   TEAM 4
SHOT POINT 19
SHOT TIME: 154: 4:45: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	761	7.492	93.2	61	6	3	24	6	42	0
2	762	7.099	92.7	62	5	3	24	6	42	0
3	763	6.670	91.8	63	4	3	24	6	42	0
4	764	6.403	90.2	64	--		24	6	42	1
5	765	6.021	93.9	65	0	3	24	6	42	0
6	766	5.543	95.2	66	-4	3	24	6	42	0
7	767	5.160	93.9	67	-7	3	24	6	42	0
8	768	4.807	92.1	68	-7	2	36	6	42	0
9	769	4.441	89.6	69	3	3	24	6	42	0
10	770	4.055	89.4	70	12	3	24	6	42	0
11	771	3.666	90.5	71	-6	3	24	6	42	0
12	772	3.285	92.4	72	8	3	24	6	42	0
13	773	2.891	92.4	73	-2		24	6	42	1
14	774	2.490	91.1	74	-4	3	24	6	42	0
15	775	2.118	90.2	75	6	3	24	6	42	0
16	776	1.729	88.6	76	0	3	24	6	42	0
17	777	1.338	85.0	77	0	3	24	6	42	0
18	778	0.968	79.8	78	3	3	24	6	42	0
19	779	0.649	63.3	79	5	3	24	6	42	0
20	780	0.441	31.1	80	6	3	24	6	42	0

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                              DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER    2   TEAM 5
SHOT POINT  19
SHOT TIME:  154: 4:45: 0.012
                                                                        TAPE
      LOC  DIST(KM)   AZIM    UNIT CHRON CHAN  C1  C2 C3   GRADE

  1   781     0.624  316.9     81   -23    3   24   6 82       0
  2   782     0.961  301.5     82    -8    2   24   6 82       0
  3   783     1.325  292.5     83    13    1   24   6 82       0
  4   784     1.601  281.6     84    12    1   24   6 82       0
  5   785     1.980  281.8     85   -39    1   24   6 82       0
  6   786     2.378  283.2     86   -55    1   24   6 82       0
  7   787     2.767  283.7     87    10    1   24   6 82       0
  8   788     3.138  283.2     88    20    3   24   6 42       0
  9   789     3.301  286.0     89    10    3   24   6 42       0
 10   790     3.926  285.8     90     5    3   24   6 42       0
 11   791     4.335  284.7     91     5    3   24   6 42       0
 12   792     4.555  279.9     92     6         24   6 42      25
 13   793     6.104  221.3     93    -6    1   24   6 42       0
 14   794     6.777  225.9     94    10    1   24   6 42       0
 15   795     7.440  230.6     95    22    1   24   6 42       0
 16   796     7.961  234.2     96   -25    3   24   6 42       0
 17   797     9.364  231.5     97     6    3   24   6 42       0
 18   798    10.117  231.6     98     9    1   24   6 42       0
 19   799    11.389  231.6     99     8    1   24   6 42       0
 20   800    12.131  233.6    100     7    1   24   6 42       0
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                              DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   2    TEAM 6
SHOT POINT  19
SHOT TIME:  154: 4:45: 0.012
                                                                        TAPE
      LOC  DIST(KM)   AZIM    UNIT CHRON CHAN  C1  C2 C3   GRADE

  1   701    28.476   82.7    101     0    1   24   6 82       0
  2   702    28.279   82.0    102    --    0   24   6 82       1
  3   703    28.061   81.4    103     4    0   24   6 82       2
  4   704    27.828   80.8    104     0    1   24   6 82       0
  5   705    27.598   80.1    105    15    1   24   6 82       0
  6   706    27.256   79.7    106   -10    0   24   6 82       1
  7   707    26.886   79.5    107   -38    1   24   6 82       0
  8   708    26.527   79.3    108     9    1   24   6 82       0
  9   709    26.168   79.4    109     3    1   24   6 42       0
 10   710    25.786   79.5    110    18    1   24   6 42       0
 11   711    25.450   79.1    111    15    2   24   6 42    0/12
 12   712    25.074   78.9    112    -2    2   24   6 42    0/12
 13   713    24.648   78.9    113    -7    0   24   6 42      12
 14   714    24.295   78.9    114    -3    2   24   6 42       0
 15   715    23.901   78.8    115     0    0   24   6 42      17
 16   716    23.505   78.8    116     9    2   24   6 42       0
 17   717    23.089   78.9    117     4    2   24   6 42       0
 18   718    22.739   79.2    118     5    1   24   6 42       0
 19   719    22.367   78.9    119     0    1   24   6 42       0
 20   720    21.979   79.0    120    -4    1   24   6 42       0
```

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   3   TEAM 1
SHOT POINT 18
SHOT TIME: 154: 5: 0: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C[illegible]	C2	C3	TAPE GRADE
1	801	25.193	252.2	1	-18	1	24	6	42	0
2	802	25.953	253.7	2	-16	2	24	6	42	0
3	803	27.074	253.6	3	7	2	24	6	42	0
4	804	27.692	255.6	4	-117	1	24	6	42	0
5	805	28.604	257.1	5	35	2	24	6	42	0
6	806	29.558	259.4	6	5	2	24	6	42	0
7	807	30.776	260.7	7	-15	1	24	6	42	0
8	808	31.597	259.6	8	48	2	24	6	42	0
9	809	32.597	259.2	9	8	2	24	6	42	0
10	810	33.815	258.0	10	-4	1	24	6	42	0
11	811	34.649	257.5	11	35	1	24	6	42	0
12	812	35.560	257.8	12	3	1	24	6	42	0
13	813	36.458	257.4	13	1	1	24	6	42	0
14	814	37.288	257.3	14	41	2	24	6	42	0
15	815	38.081	257.1	15	-2	2	24	6	42	0
16	816	39.026	257.9	16	17	2	24	6	42	0
17	817	40.114	258.3	17	27	2	24	6	42	0
18	818	41.169	256.9	18	1	2	24	6	42	0
19	819	41.901	255.9	19	35	2	24	6	42	0
20	820	43.779	257.8	20	-12	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   3   TEAM 2
SHOT POINT 18
SHOT TIME: 154: 5: 0: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	721	8.787	67.8	21	-6	3	24	6	42	0
2	722	8.456	68.4	22	10	3	24	6	42	0
3	723	8.278	70.8	23	16	3	24	6	42	0
4	724	7.941	72.4	24	-40		24	6	42	1
5	725	7.623	73.7	25	5	3	24	6	42	0
6	726	7.333	75.6	26	3	3	24	6	42	0
7	727	7.091	77.9	27	-5	3	24	6	42	0
8	728	6.785	79.8	28	11	3	24	6	42	0
9	729	6.413	81.0	29	9	3	24	6	42	0
10	730	6.020	82.0	30	4	3	24	6	42	0
11	731	5.715	84.9	31	7	3	24	6	42	0
12	732	5.485	87.9	32	--		24	6	42	1
13	733	5.243	91.4	33	--		24	6	42	1
14	734	5.062	94.7	34	5		24	6	42	17
15	735	4.766	97.9	35	-31	3	24	6	42	0
16	736	4.335	98.8	36	-5	3	24	6	42	0
17	737	4.081	100.9	37	16		24	6	42	2
18	738	3.742	104.2	38	--		24	6	42	1
19	739	3.437	108.2	39	3	3	24	6	42	0
20	740	2.940	106.7	40	--		24	6	42	1

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER 3   TEAM 3
SHOT POINT 18
SHOT TIME: 154: 5: 0: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	741	2.540	107.1	41	4		24	6	82	17
2	742	1.997	100.9	42	3	1	24	6	42	0
3	743	1.604	94.9	43	-19	1	24	6	42	0
4	744	1.237	90.8	44	-23	1	24	6	42	0
5	745	0.841	91.1	45	1	1	24	6	42	0
6	746	0.467	103.6	46	-53	1	24	6	42	0
7	747	0.194	163.3	47	37		24	6	42	3
8	748	0.427	231.9	48	-39		24	6	42	1
9	749	0.811	244.0	49	4	3	24	6	42	0
10	750	1.201	248.8	50	6	3	24	6	42	0
11	751	1.596	251.4	51	10	1	24	6	42	0
12	752	2.785	237.0	52	-15	1	24	6	42	0
13	753	2.929	243.1	53	3	2	24	6	42	0
14	754	3.317	248.3	54	-16	1	24	6	42	0
15	755	3.757	249.9	55	-12	1	24	6	42	0
16	756	4.164	248.8	56	-3	3	24	6	42	0
17	757	4.453	249.1	57	-46	3	24	6	42	0
18	758	4.814	251.8	58	-5	3	24	6	42	0
19	759	5.072	254.7	59	-4	3	24	6	42	0
20	760	5.542	255.9	60	-7	3	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER 3   TEAM 4
SHOT POINT 18
SHOT TIME: 154: 5: 0: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	761	5.714	258.7	61	6	3	24	6	42	0
2	762	6.080	260.2	62	5	3	24	6	42	0
3	763	6.481	261.9	63	4	3	24	6	42	0
4	764	6.719	263.8	64	--		24	6	42	1
5	765	7.164	261.0	65	0	3	24	6	42	0
6	766	7.659	260.9	66	-4	3	24	6	42	0
7	767	8.005	262.4	67	-7	3	24	6	42	0
8	768	8.325	263.9	68	-8		36	6	42	2
9	769	8.667	265.5	69	3	3	24	6	42	0
10	770	9.051	265.8	70	12	3	24	6	42	0
11	771	9.445	265.5	71	-6	3	24	6	42	0
12	772	9.836	265.1	72	8	3	24	6	42	0
13	773	10.227	265.4	73	-2		24	6	42	1
14	774	10.619	265.9	74	-5	3	24	6	42	0
15	775	10.987	266.3	75	6	1	24	6	42	0
16	776	11.373	266.6	76	0	3	24	6	42	0
17	777	11.764	267.1	77	0	2	24	6	42	0
18	778	12.141	267.5	78	3	1	24	6	42	0
19	779	12.509	268.1	79	5	1	24	6	42	0
20	780	12.858	268.5	80	6	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   3   TEAM 5
SHOT POINT 18
SHOT TIME: 154: 5: 0: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	781	13.510	268.9	81	-24	1	24	6	82	0
2	782	13.902	269.2	82	-8	1	24	6	82	0
3	783	14.306	269.2	83	13	1	24	6	82	0
4	784	14.655	268.5	84	13	1	24	6	82	0
5	785	15.023	268.8	85	-39	1	24	6	82	0
6	786	15.398	269.4	86	-56	1	24	6	82	0
7	787	15.770	269.8	87	10	1	24	6	82	0
8	788	16.137	270.0	88	21	1	24	6	42	0
9	789	16.448	270.9	89	10	1	24	6	42	0
10	790	16.862	271.2	90	5	1	24	6	42	0
11	791	17.279	271.3	91	5	1	24	6	42	0
12	792	17.568	270.3	92	6	2	24	6	42	25
13	793	17.913	252.8	93	-6	1	24	6	42	0
14	794	18.756	253.2	94	11	1	24	6	42	0
15	795	19.603	253.9	95	22	1	24	6	42	0
16	796	20.265	254.7	96	-26	1	24	6	42	0
17	797	21.434	252.2	97	7	1	24	6	42	0
18	798	22.146	251.6	98	10	1	24	6	42	0
19	799	23.348	250.5	99	8		24	6	42	17
20	800	24.180	250.9	100	8	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   3   TEAM 6
SHOT POINT 18
SHOT TIME: 154: 5: 0: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	15.442	79.1	101	15	1	24	6	82	0
2	702	15.269	77.8	102	--		24	6	82	1
3	703	15.074	76.7	103	4		24	6	82	3
4	704	14.869	75.5	104	0		24	6	82	3
5	705	14.672	74.1	105	15	1	24	6	82	0
6	706	14.355	73.2	106	-10		24	6	82	1
7	707	13.999	72.6	107	-38	2	24	6	82	21
8	708	13.655	72.0	108	10	2	24	6	82	0
9	709	13.293	72.0	109	3	2	24	6	42	0
10	710	12.909	72.0	110	18	3	24	6	42	0
11	711	12.601	70.9	111	15	2	24	6	42	21
12	712	12.244	70.2	112	-2	2	24	6	42	21
13	713	11.819	70.0	113	-7		24	6	42	12
14	714	11.471	69.7	114	-3	1	24	6	42	0
15	715	11.087	69.2	115	-2		24	6	42	17
16	716	10.701	68.8	116	9	1	24	6	42	0
17	717	10.282	68.7	117	4	1	24	6	42	0
18	718	9.917	69.0	118	5	3	24	6	42	0
19	719	9.571	68.0	119	0	3	24	6	42	0
20	720	9.186	67.6	120	-4	3	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12
SHOT NUMBER 4 TEAM 1
SHOT POINT 11
SHOT TIME: 157: 2: 0: 0.011

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	39.833	169.7	1	15	2	24	6	62	0
2	1002	40.225	169.8	2	-30	2	24	6	42	0
3	1003	40.617	169.9	3	6	2	24	6	42	0
4	1004	41.031	170.0	4	0	2	24	6	42	0
5	1005	41.396	170.1	5	41	2	24	6	42	0
6	1006	41.822	170.2	6	9		24	6	42	1
7	1007	42.180	170.3	7	-5	2	24	6	42	0
8	1008	42.567	170.4	8	45		24	6	42	21
9	1009	42.958	170.5	9	-6	2	24	6	42	0
10	1010	43.369	170.6	10	-11		24	6	42	3
11	1011	43.738	170.7	11	32	2	24	6	42	0
12	1012	44.136	170.7	12	0	2	24	6	42	0
13	1013	44.518	170.8	13	-2	2	24	6	42	0
14	1014	45.008	170.9	14	327	2	24	6	62	0
15	1015	45.345	171.0	15	-4	2	24	6	62	0
16	1016	45.774	171.1	16	6	2	24	6	82	0
17	1017	46.150	171.1	17	29	2	24	6	82	0
18	1018	46.593	171.2	18	4	2	24	6	82	0
19	1019	55.407	170.7	19	39		24	6	82	21
20	1020	55.797	170.7	20	-16		24	6	82	3

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 4 TEAM 2
SHOT POINT 11
SHOT TIME: 157: 2: 0: 0.011

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	14.970	172.2	21	4	1	24	6	82	0
2	922	14.770	170.9	22	7	1	24	6	82	0
3	923	14.581	169.6	23	12		24	6	82	2
4	924	14.475	168.1	24	-11	3	24	6	42	0
5	925	14.486	166.2	25	--		24	6	82	1
6	926	14.398	164.7	26	4	1	24	6	82	0
7	927	14.165	163.5	27	-21	1	24	6	82	0
8	928	13.841	162.6	28	--		24	6	82	1
9	929	13.504	161.9	29	8	1	24	6	82	0
10	930	13.189	161.0	30	3	1	24	6	42	0/15
11	931	13.012	159.5	31	8	1	24	6	42	0
12	932	12.807	158.1	32	-3	1	24	6	42	0
13	933	15.047	162.0	33	-82	1	24	6	42	0
14	934	15.368	162.8	34	3	1	24	6	42	0
15	935	15.713	163.5	35	-86		24	6	42	2
16	936	16.065	164.1	36	-6	1	24	6	42	0
17	937	16.437	164.6	37	--		24	6	82	1
18	938	16.800	165.1	38	2		24	6	42	3
19	939	17.205	165.6	39	6	1	24	6	42	0
20	940	17.489	166.1	40	4	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 4 TEAM 3
SHOT POINT 11
SHOT TIME: 157: 2: 0: 0.011

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	17.984	166.8	41	7		24	6	42	21
2	942	18.323	167.3	42	0	2	24	6	42	0/21
3	943	18.681	167.8	43	-21		24	6	42	1
4	944	19.049	168.3	44	-21	1	24	6	42	0
5	945	19.413	168.6	45	2		24	6	42	3
6	946	19.776	169.1	46	-52	1	24	6	42	0
7	947	20.162	169.3	47	33	1	24	6	42	0
8	948	20.548	169.2	48	-37		24	6	82	2
9	949	20.917	168.9	49	2	1	24	6	42	0
10	950	21.307	168.7	50	-4	1	24	6	42	0
11	951	21.619	168.2	51	3	1	24	6	42	0
12	952	21.971	167.7	52	-16	1	24	6	42	0
13	953	22.205	167.6	53	3	1	24	6	42	0
14	954	22.563	167.2	54	-14	2	24	6	42	0
15	955	23.006	166.9	55	-14	2	24	6	42	0
16	956	23.478	166.6	56	-2	1	24	6	82	0
17	957	23.841	166.3	57	-39		24	6	42	2
18	958	24.199	165.9	58	-5	1	24	6	42	0
19	959	24.562	165.5	59	-4		24	6	42	1
20	960	24.930	165.2	60	-6	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 4 TEAM 4
SHOT POINT 11
SHOT TIME: 157: 2: 0: 0.011

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	25.286	164.9	61	8	1	24	6	42	0
2	962	25.672	164.7	62	8	1	24	6	42	0
3	963	26.060	164.7	63	7		24	6	42	1
4	964	26.419	165.0	64	10	1	24	6	42	0
5	965	26.789	165.3	65	0		24	6	42	1
6	966	27.136	165.7	66	-6	2	24	6	42	0
7	967	27.505	166.0	67	-21	2	24	6	62	0
8	968	27.866	166.3	68	-13	1	24	6	62	0
9	969	28.254	166.5	69	4	1	24	6	82	0
10	970	28.632	166.8	70	7	1	24	6	82	0
11	971	28.942	167.0	71	-15	2	24	6	82	0
12	972	29.301	165.8	72	10	2	24	6	82	0
13	973	29.556	165.9	73	-2		24	6	82	12
14	974	29.882	166.2	74	0	2	24	6	62	0
15	975	30.170	166.7	75	8	2	24	6	62	0
16	976	30.437	167.2	76	-3	1	24	6	42	0
17	977	30.720	167.5	77	-2	1	24	6	42	0
18	978	31.081	167.6	78	--	2	24	6	42	0
19	979	31.401	168.0	79	7	2	24	6	42	0
20	980	31.725	168.4	80	10	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 4 TEAM 5
SHUT POINT 11
SHOT TIME: 157: 2: 0: 0.011

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	32.035	168.6	81	-14	1	24	6	42	0
2	982	32.446	168.6	82	7	1	24	6	42	0
3	983	32.758	168.9	83	8	2	24	6	42	0
4	984	33.134	169.1	84	7	1	24	6	42	0
5	985	33.492	169.3	85	-37		24	6	42	3
6	986	33.867	169.4	86	-34	2	24	6	42	0
7	987	34.220	169.7	87	5	1	24	6	42	0
8	988	34.592	169.5	88	16	2	24	6	42	0
9	989	34.955	169.4	89	8	2	24	6	42	0
10	990	35.321	169.4	90	0	2	24	6	42	0
11	991	35.714	169.3	91	9	2	24	6	42	0
12	992	36.096	169.5	92	5	2	24	6	42	0
13	993	36.480	169.6	93	-8	2	24	6	42	0
14	994	36.875	169.5	94	7	2	24	6	42	0
15	995	37.545	169.2	95	18		24	6	82	2
16	996	37.939	169.2	96	-21	2	24	6	82	0
17	997	38.330	169.3	97	6	2	24	6	82	0
18	998	38.674	169.4	98	9	2	24	6	82	0
19	999	39.057	169.5	99	3	2	24	6	82	0
20	1000	39.453	169.6	100	6	2	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 4 TEAM 6
SHOT POINT 11
SHOT TIME: 157: 2: 0: 0.011

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	8.669	165.6	101	13	1	24	6	82	0
2	902	8.346	163.4	102	3		24	6	82	1
3	903	8.060	161.6	103	9	1	24	6	82	0
4	904	7.892	159.1	104	0	1	24	6	82	0
5	905	0.132	199.5	105	12		24	6	62	21
6	906	0.087	111.2	106	-12		24	6	62	21
7	907	8.984	166.5	107	-6	1	24	6	82	0
8	908	9.362	166.7	108	7	2	24	6	82	0
9	909	9.718	167.7	109	2	1	24	6	82	0
10	910	10.063	168.9	110	17	1	24	6	62	0
11	911	10.426	169.7	111	-2	2	24	6	62	0
12	912	10.785	170.6	112	-6	2	24	6	62	0
13	913	11.150	171.5	113	-6	1	24	6	42	0
14	914	11.514	172.2	114	1	1	24	6	42	0
15	915	11.886	172.8	115	-4	1	24	6	42	0
16	916	12.257	173.5	116	6	1	24	6	42	0
17	917	12.630	174.1	117	2	1	24	6	42	0
18	918	13.021	174.7	118	-4	1	24	6	42	0
19	919	13.380	175.3	119	0	3	24	6	42	0
20	920	13.755	175.7	120	-5	3	24	6	42	0/12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 5 TEAM 1
SHOT POINT 13
SHOT TIME: 157: 2:15: 0.007

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	25.401	170.8	1	15	2	24	6	62	12
2	1002	25.794	170.9	2	-30	1	24	6	42	0
3	1003	26.187	171.0	3	7	1	24	6	42	0
4	1004	26.603	171.2	4	0	1	24	6	42	0
5	1005	26.969	171.3	5	41	1	24	6	42	0
6	1006	27.397	171.4	6	9		24	6	42	1
7	1007	27.756	171.5	7	-5	1	24	6	42	0
8	1008	28.143	171.7	8	45		24	6	42	21
9	1009	28.537	171.8	9	-6	2	24	6	42	0
10	1010	28.949	171.9	10	-12		24	6	42	2
11	1011	29.320	172.0	11	33	2	24	6	42	0
12	1012	29.718	172.1	12	0	2	24	6	42	0
13	1013	30.102	172.2	13	-2	2	24	6	42	0
14	1014	30.593	172.3	14	337	2	24	6	62	0
15	1015	30.932	172.4	15	-4	2	24	6	62	0
16	1016	31.362	172.5	16	6	2	24	6	82	0/21
17	1017	31.740	172.6	17	29	2	24	6	82	0
18	1018	32.185	172.7	18	4	2	24	6	82	0
19	1019	40.986	171.6	19	40		24	6	82	21
20	1020	41.377	171.7	20	-16		24	6	82	3

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 5 TEAM 2
SHOT POINT 13
SHOT TIME: 157: 2:15: 0.007

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	1.231	234.8	21	4	3	24	6	82	0
2	922	0.826	236.2	22	7	3	24	6	82	0
3	923	0.447	240.8	23	12		24	6	82	2
4	924	0.050	219.4	24	-11	3	24	6	42	0
5	925	0.422	82.9	25	--		24	6	82	1
6	926	0.801	73.1	26	4	3	24	6	82	0
7	927	1.131	61.5	27	-21	3	24	6	82	0
8	928	1.436	50.5	28	--		24	6	82	1
9	929	1.741	42.3	29	8	3	24	6	82	0
10	930	2.083	37.5	30	3	3	24	6	42	15
11	931	2.464	38.3	31	8	3	24	6	42	0
12	932	2.848	38.1	32	-3	3	24	6	42	0
13	933	1.639	96.5	33	-83	1	24	6	42	0
14	934	1.617	110.2	34	3	1	24	6	42	0
15	935	1.719	123.3	35	-87		24	6	42	2
16	936	1.908	134.2	36	-6	3	24	6	42	0
17	937	2.184	142.1	37	--		24	6	82	1
18	938	2.478	148.4	38	2	3	24	6	42	24
19	939	2.834	153.7	39	6	3	24	6	42	0
20	940	3.085	157.9	40	4	3	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 5 TEAM 3
SHOT POINT 13
SHOT TIME: 157: 2:15: 0.007

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	3.554	162.3	41	7		24	6	42	25
2	942	3.884	165.1	42	0	2	24	6	42	0
3	943	4.237	167.5	43	-21		24	6	42	1
4	944	4.607	169.4	44	-21	3	24	6	42	0
5	945	4.974	170.8	45	2		24	6	42	0
6	946	5.343	172.2	46	-52	3	24	6	42	12
7	947	5.734	172.9	47	34	3	24	6	42	25
8	948	6.117	172.2	48	-38		24	6	82	1
9	949	6.480	171.0	49	2	1	24	6	42	0
10	950	6.868	170.5	50	-4	1	24	6	42	0
11	951	7.176	168.8	51	3	1	24	6	42	0
12	952	7.528	167.4	52	-17	1	24	6	42	0
13	953	7.762	166.9	53	3	1	24	6	42	0
14	954	8.122	166.0	54	-14	1	24	6	42	0
15	955	8.569	165.2	55	-14	1	24	6	42	0
16	956	9.044	164.6	56	-2	1	24	6	82	0
17	957	9.412	163.9	57	-39		24	6	42	1
18	958	9.778	162.9	58	-5	3	24	6	42	0
19	959	10.148	162.2	59	-4		24	6	42	1
20	960	10.524	161.6	60	-6	3	24	6	42	12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 5 TEAM 4
SHOT POINT 13
SHOT TIME: 157: 2:15: 0.007

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	10.889	160.9	61	8	3	24	6	42	0
2	962	11.280	160.6	62	8	3	24	6	42	0
3	963	11.668	160.7	63	7		24	6	42	1
4	964	12.016	161.6	64	10	3	24	6	42	0
5	965	12.378	162.3	65	0		24	6	42	1
6	966	12.716	163.2	66	-6	1	24	6	42	0
7	967	13.078	163.9	67	-21	1	24	6	62	0
8	968	13.435	164.5	68	-13	1	24	6	62	0
9	969	13.819	165.1	69	4		24	6	82	21
10	970	14.194	165.6	70	7	1	24	6	82	0
11	971	14.503	166.0	71	-15	1	24	6	82	0
12	972	14.876	163.9	72	10	1	24	6	82	0
13	973	15.130	164.0	73	-2	1	24	6	82	0
14	974	15.450	164.7	74	0	1	24	6	62	0
15	975	15.732	165.7	75	8	1	24	6	62	0
16	976	15.996	166.6	76	-3	3	24	6	42	0
17	977	16.278	167.1	77	-2	1	24	6	42	0
18	978	16.638	167.4	78	--	1	24	6	42	0
19	979	16.958	168.1	79	7	1	24	6	42	0
20	980	17.282	168.8	80	11	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   5   TEAM 5
SHOT POINT   13
SHOT TIME: 157: 2:15: 0.007

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	17.593	169.1	81	-15	3	24	6	42	0
2	982	18.004	169.2	82	7		24	6	42	21
3	983	18.319	169.7	83	8	1	24	6	42	0
4	984	18.696	170.0	84	7		24	6	42	21
5	985	19.056	170.3	85	-38		24	6	42	21
6	986	19.432	170.6	86	-34	1	24	6	42	0
7	987	19.789	170.9	87	5	1	24	6	42	0
8	988	20.158	170.7	88	16	1	24	6	42	0
9	989	20.519	170.4	89	8	1	24	6	42	0
10	990	20.885	170.4	90	0	1	24	6	42	0
11	991	21.277	170.3	91	9	1	24	6	42	0
12	992	21.661	170.5	92	5	1	24	6	42	0
13	993	22.047	170.7	93	-9	1	24	6	42	0
14	994	22.441	170.6	94	7	1	24	6	42	0
15	995	23.108	170.1	95	18		24	6	82	1
16	996	23.502	170.0	96	-21	1	24	6	82	0
17	997	23.893	170.2	97	6	1	24	6	82	0
18	998	24.239	170.3	98	9	1	24	6	82	0
19	999	24.623	170.5	99	3		24	6	82	1
20	1000	25.020	170.6	100	6	1	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   5   TEAM 6
SHOT POINT   13
SHOT TIME: 157: 2:15: 0.007

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	5.792	351.4	101	13	1	24	6	82	0
2	902	6.158	354.0	102	3		24	6	82	1
3	903	6.492	355.7	103	10	1	24	6	82	0
4	904	6.753	358.2	104	0	1	24	6	82	0
5	905	14.331	347.6	105	12		24	6	62	21
6	906	14.396	348.2	106	-12		24	6	62	21
7	907	5.467	350.2	107	-6	1	24	6	82	0
8	908	5.088	350.1	108	7	2	24	6	82	0
9	909	4.726	348.2	109	2	1	24	6	82	0
10	910	4.385	345.7	110	17	3	24	6	62	0
11	911	4.036	343.2	111	-2	3	24	6	62	0
12	912	3.706	339.9	112	-6	2	24	6	62	0
13	913	3.387	336.1	113	-6		24	6	42	12
14	914	3.086	331.6	114	1	3	24	6	42	0
15	915	2.796	326.4	115	-4	3	24	6	42	0
16	916	2.545	319.8	116	6	3	24	6	42	0
17	917	2.331	312.0	117	2	3	24	6	42	0
18	918	2.165	302.3	118	-4	3	24	6	42	0
19	919	2.089	292.1	119	0	3	24	6	42	0
20	920	2.050	281.4	120	-5	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   6   TEAM 1
SHOT POINT 17
SHOT TIME: 157: 4:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	6.727	359.4	1	17	1	24	6	62	0
2	1002	6.330	359.4	2	-33	3	24	6	42	0
3	1003	5.932	359.3	3	7	3	24	6	42	0
4	1004	5.510	359.3	4	-2		24	6	42	1
5	1005	5.140	359.2	5	45	3	24	6	42	0
6	1006	4.707	359.1	6	10		24	6	42	1
7	1007	4.345	359.1	7	-5	3	24	6	42	0
8	1008	3.953	359.0	8	49		24	6	42	1
9	1009	3.555	358.9	9	-7	3	24	6	42	0
10	1010	3.139	358.8	10	-13		24	6	42	7
11	1011	2.764	358.4	11	35	3	24	6	42	0
12	1012	2.363	358.3	12	0	3	24	6	42	0
13	1013	1.976	358.2	13	-2	3	24	6	42	0
14	1014	1.479	357.2	14	432		24	6	62	2
15	1015	1.138	356.3	15	-5	3	24	6	62	0
16	1016	0.706	354.5	16	6		24	6	82	3
17	1017	0.329	347.7	17	32	3	24	6	82	0
18	1018	0.148	210.3	18	5	3	24	6	82	0
19	1019	8.938	168.3	19	43		24	6	82	21
20	1020	9.325	168.8	20	-18		24	6	82	17

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   6 TEAM 2
SHOT POINT 17
SHOT TIME: 157: 4:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	31.513	350.6	21	4	1	24	6	82	0
2	922	31.709	351.2	22	7	1	24	6	82	0
3	923	31.905	351.8	23	13		24	6	82	21
4	924	32.033	352.5	24	-12	1	24	6	42	21
5	925	32.068	353.3	25	--		24	6	82	1
6	926	32.209	354.0	26	4	1	24	6	82	0
7	927	32.492	354.4	27	-23	1	24	6	82	0
8	928	32.853	354.7	28	--		24	6	82	1
9	929	33.219	354.9	29	9	1	24	6	82	0
10	930	33.574	355.1	30	3	1	24	6	42	0/30
11	931	33.833	355.6	31	8	2	24	6	42	0
12	932	34.124	356.0	32	-4	1	24	6	42	0
13	933	31.712	355.4	33	-90	1	24	6	42	0
14	934	31.350	355.2	34	3	1	24	6	42	0
15	935	30.974	355.0	35	-95		24	6	42	2
16	936	30.595	354.8	36	-6	1	24	6	42	0
17	937	30.205	354.7	37	--		24	6	82	1
18	938	29.823	354.5	38	2	1	24	6	42	0
19	939	29.400	354.4	39	6	1	24	6	42	0
20	940	29.094	354.1	40	4	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 6 TEAM 3
SHOT POINT 17
SHOT TIME: 157: 4:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	28.577	353.8	41	8		24	6	42	17
2	942	28.222	353.6	42	0	2	24	6	42	0
3	943	27.849	353.3	43	-24		24	6	42	1
4	944	27.469	353.1	44	-23	1	24	6	42	0
5	945	27.096	352.9	45	3	1	24	6	42	0
6	946	26.725	352.6	46	-57	1	24	6	42	12
7	947	26.334	352.5	47	37		24	6	42	21
8	948	25.951	352.6	48	-42		24	6	82	1
9	949	25.590	353.0	49	2	1	24	6	42	0
10	950	25.206	353.1	50	-4	1	24	6	42	0
11	951	24.912	353.7	51	4	1	24	6	42	0
12	952	24.579	354.1	52	-18	1	24	6	42	0
13	953	24.355	354.4	53	4	1	24	6	42	0
14	954	24.016	354.8	54	-15	1	24	6	42	0
15	955	23.595	355.2	55	-15	1	24	6	42	0
16	956	23.144	355.7	56	-3	1	24	6	82	0
17	957	22.808	356.1	57	-43		24	6	42	1
18	958	22.489	356.8	58	-5	1	24	6	42	0
19	959	22.161	357.3	59	-5		24	6	42	1
20	960	21.830	357.9	60	-6	1	24	6	42	12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 6 TEAM 4
SHOT POINT 17
SHOT TIME: 157: 4:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	21.517	358.5	61	9	1	24	6	42	0
2	962	21.162	358.9	62	9	1	24	6	42	0
3	963	20.788	359.2	63	8		24	6	42	1
4	964	20.401	359.0	64	11	1	24	6	42	0
5	965	20.011	358.9	65	0		24	6	42	1
6	966	19.632	358.6	66	-6	1	24	6	42	0
7	967	19.242	358.5	67	-23	1	24	6	62	0
8	968	18.859	358.3	68	-15	1	24	6	62	0
9	969	18.454	358.2	69	5	1	24	6	82	0
10	970	18.060	358.0	70	8	1	24	6	82	0
11	971	17.735	357.9	71	-16	1	24	6	82	0
12	972	17.509	360.0	72	11	1	24	6	82	33
13	973	17.256	0.1	73	-2	1	24	6	82	0
14	974	16.895	359.8	74	0	1	24	6	62	0
15	975	16.558	359.1	75	9	1	24	6	62	0
16	976	16.243	358.4	76	-3	1	24	6	42	0
17	977	15.940	358.2	77	-2	3	24	6	42	0
18	978	15.572	358.1	78	--	3	24	6	42	0
19	979	15.217	357.5	79	8	1	24	6	42	0
20	980	14.868	357.0	80	12	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 6 TEAM 5
SHOT POINT 17
SHOT TIME: 157: 4:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	14.545	356.8	81	-16		24	6	42	12
2	982	14.136	356.9	82	8		24	6	42	12
3	983	13.801	356.3	83	9	3	24	6	42	21
4	984	13.416	356.1	84	8	3	24	6	42	0
5	985	13.047	355.8	85	-41	3	24	6	42	12
6	986	12.664	355.6	86	-37	3	24	6	42	0
7	987	12.300	355.2	87	6	3	24	6	42	0
8	988	11.940	355.8	88	18	3	24	6	42	0
9	989	11.589	356.4	89	8	3	24	6	42	0
10	990	11.227	356.7	90	0	3	24	6	42	0
11	991	10.841	357.1	91	10	3	24	6	42	0
12	992	10.449	356.8	92	5	2	24	6	42	0
13	993	10.059	356.7	93	-9	3	24	6	42	0
14	994	9.672	357.2	94	7	1	24	6	42	0
15	995	9.038	359.0	95	20		24	6	82	6
16	996	8.654	359.6	96	-24	1	24	6	82	0
17	997	8.256	359.5	97	6	1	24	6	82	0
18	998	7.905	359.5	98	10	1	24	6	82	0
19	999	7.515	359.4	99	4	1	24	6	82	0
20	1000	7.114	359.4	100	6	1	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 6 TEAM 6
SHOT POINT 17
SHOT TIME: 157: 4:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	37.859	352.4	101	15	1	24	6	82	0
2	902	38.224	352.8	102	3		24	6	82	1
3	903	38.552	353.1	103	10	1	24	6	82	0
4	904	38.793	353.5	104	0	1	24	6	82	21
5	905	46.362	351.0	105	13		24	6	62	21
6	906	46.435	351.2	106	-14		24	6	62	21
7	907	37.531	352.2	107	-7	1	24	6	82	0
8	908	37.152	352.2	108	8	2	24	6	82	21
9	909	36.782	352.0	109	2	1	24	6	82	0
10	910	36.425	351.7	110	19	1	24	6	62	0
11	911	36.056	351.5	111	-3	2	24	6	62	0
12	912	35.694	351.3	112	-7	1	24	6	62	21
13	913	35.329	351.0	113	-7	2	24	6	42	0
14	914	34.968	350.8	114	1	1	24	6	42	0
15	915	34.600	350.5	115	-5	1	24	6	42	0
16	916	34.237	350.3	116	6	1	24	6	42	0
17	917	33.873	350.0	117	2		24	6	42	0
18	918	33.494	349.7	118	-4	1	24	6	42	0
19	919	33.150	349.4	119	0	1	24	6	42	0
20	920	32.788	349.2	120	-6	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   7   TEAM 1
SHOT POINT 15
SHOT TIME: 157: 5:30: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	11.017	177.7	1	17	1	24	6	62	0
2	1002	11.414	177.7	2	-34	1	24	6	42	0
3	1003	11.812	177.8	3	7	1	24	6	42	0
4	1004	12.233	177.9	4	-2	1	24	6	42	0
5	1005	12.603	177.9	5	46	1	24	6	42	0
6	1006	13.036	178.0	6	10		24	6	42	1
7	1007	13.398	178.0	7	-6	1	24	6	42	0
8	1008	13.790	178.1	8	51	2	24	6	42	0
9	1009	14.187	178.2	9	-7	1	24	6	42	0
10	1010	14.603	178.2	10	-13		24	6	42	1
11	1011	14.978	178.3	11	37	1	24	6	42	0
12	1012	15.380	178.3	12	0	1	24	6	42	0
13	1013	15.766	178.3	13	-2	1	24	6	42	0
14	1014	16.263	178.4	14	474	1	24	6	62	0
15	1015	16.605	178.4	15	-5	1	24	6	62	0
16	1016	17.038	178.5	16	7	2	24	6	82	0
17	1017	17.419	178.5	17	33	1	24	6	82	0
18	1018	17.868	178.6	18	5	1	24	6	82	0
19	1019	26.590	175.0	19	45		24	6	82	21
20	1020	26.983	175.0	20	-18		24	6	82	17

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   7   TEAM 2
SHOT POINT 15
SHOT TIME: 157: 5:30: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	14.134	340.9	21	4	1	24	6	82	0
2	922	14.270	342.4	22	8	1	24	6	82	0
3	923	14.416	343.8	23	14		24	6	82	21
4	924	14.493	345.4	24	-12	3	24	6	42	0
5	925	14.475	347.2	25	--		24	6	82	1
6	926	14.579	348.7	26	5		24	6	82	17
7	927	14.838	349.8	27	-24	1	24	6	82	0
8	928	15.187	350.5	28	--		24	6	82	1
9	929	15.545	350.9	29	9	1	24	6	82	0
10	930	15.891	351.5	30	3	1	24	6	42	0/30
11	931	16.133	352.5	31	9	1	24	6	42	0
12	932	16.412	353.5	32	-4	1	24	6	42	0
13	933	14.019	351.8	33	-93	1	24	6	42	0
14	934	13.668	351.1	34	3	1	24	6	42	0
15	935	13.301	350.5	35	-98		24	6	42	2
16	936	12.932	350.0	36	-7	1	24	6	42	0
17	937	12.549	349.5	37	--		24	6	82	1
18	938	12.176	349.0	38	2		24	6	42	1
19	939	11.763	348.4	39	7	1	24	6	42	0
20	940	11.473	347.6	40	4	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 7 TEAM 3
SHOT POINT 15
SHOT TIME: 157: 5:30: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	10.977	346.6	41	8		24	6	42	21
2	942	10.640	345.7	42	0	1	24	6	42	0
3	943	10.289	344.7	43	-25		24	6	42	1
4	944	9.932	343.7	44	-24	1	24	6	42	0
5	945	9.581	342.8	45	3	1	24	6	42	0
6	946	9.237	341.7	46	-60	1	24	6	42	0
7	947	8.866	340.8	47	39	1	24	6	42	0
8	948	8.478	340.7	48	-43		24	6	82	1
9	949	8.096	341.2	49	2	1	24	6	42	0
10	950	7.703	341.2	50	-4	1	24	6	42	0
11	951	7.370	342.4	51	4	1	24	6	42	0
12	952	7.004	343.5	52	-19	1	24	6	42	0
13	953	6.766	344.0	53	4	1	24	6	42	0
14	954	6.402	344.9	54	-16	1	24	6	42	0
15	955	5.954	346.1	55	-16	1	24	6	42	0
16	956	5.482	347.1	56	-3	1	24	6	82	0
17	957	5.122	348.6	57	-45		24	6	42	1
18	958	4.777	351.0	58	-6	3	24	6	42	0
19	959	4.432	353.3	59	-5		24	6	42	1
20	960	4.090	355.9	60	-7	3	24	6	42	0/12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 7 TEAM 4
SHOT POINT 15
SHOT TIME: 157: 5:30: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	3.775	359.1	61	9	1	24	6	42	0
2	962	3.426	2.0	62	9	3	24	6	42	0
3	963	3.061	4.4	63	8		24	6	42	1
4	964	2.669	3.7	64	11	3	24	6	42	0
5	965	2.278	3.6	65	0		24	6	42	1
6	966	1.893	1.8	66	-7	3	24	6	42	0
7	967	1.500	0.4	67	-24	1	24	6	62	0
8	968	1.117	358.1	68	-15	3	24	6	62	0
9	969	0.713	354.7	69	5	3	24	6	82	0
10	970	0.329	342.9	70	8	3	24	6	82	0
11	971	0.126	265.0	71	-17	3	24	6	82	0
12	972	0.561	113.7	72	12	1	24	6	82	0
13	973	0.731	130.9	73	-2	1	24	6	82	0
14	974	0.954	151.7	74	0	3	24	6	62	0
15	975	1.210	166.9	75	10	3	24	6	62	0
16	976	1.500	177.0	76	-3	3	24	6	42	0
17	977	1.803	179.6	77	-3	3	24	6	42	0
18	978	2.171	179.6	78	--	3	24	6	42	0
19	979	2.536	183.1	79	8	3	24	6	42	0
20	980	2.898	185.0	80	12	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 7 TEAM 5
SHOT POINT 15
SHOT TIME: 157: 5:30: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	3.227	185.3	81	-17	3	24	6	42	0
2	982	3.627	183.8	82	8		24	6	42	21
3	983	3.977	185.2	83	9	3	24	6	42	0
4	984	4.367	185.1	84	9	3	24	6	42	0
5	985	4.741	185.1	85	-43	3	24	6	42	0
6	986	5.128	185.1	86	-39	3	24	6	42	0
7	987	5.502	185.3	87	6	3	24	6	42	0
8	988	5.838	183.5	88	18	3	24	6	42	0
9	989	6.171	181.8	89	9	1	24	6	42	0
10	990	6.528	181.1	90	0	1	24	6	42	0
11	991	6.908	180.2	91	10	1	24	6	42	0
12	992	7.301	180.4	92	5	1	24	6	42	0
13	993	7.692	180.4	93	-10	1	24	6	42	0
14	994	8.075	179.7	94	8	1	24	6	42	0
15	995	8.705	177.6	95	21		24	6	82	6
16	996	9.092	177.1	96	-24	1	24	6	82	0
17	997	9.489	177.2	97	7	1	24	6	82	0
18	998	9.840	177.4	98	11	1	24	6	82	0
19	999	10.230	177.5	99	4		24	6	82	0
20	1000	10.631	177.6	100	7	1	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 7 TEAM 6
SHOT POINT 15
SHOT TIME: 157: 5:30: 0.012

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	20.294	347.2	101	15	1	24	6	82	0
2	902	20.634	348.1	102	3		24	6	82	1
3	903	20.944	348.7	103	11	1	24	6	82	0
4	904	21.163	349.6	104	0	1	24	6	82	21
5	905	28.849	346.6	105	13		24	6	62	21
6	906	28.911	346.9	106	-14		24	6	62	21
7	907	19.977	346.8	107	-7	1	24	6	82	0
8	908	19.599	346.7	108	8		24	6	82	0
9	909	19.245	346.2	109	2	1	24	6	82	0
10	910	18.908	345.6	110	19	1	24	6	62	0
11	911	18.556	345.0	111	-3	1	24	6	62	0
12	912	18.215	344.4	112	-7	1	24	6	62	21
13	913	17.873	343.8	113	-7	2	24	6	42	0
14	914	17.534	343.1	114	1	1	24	6	42	0
15	915	17.189	342.5	115	-5	1	24	6	42	0
16	916	16.852	341.8	116	7	1	24	6	42	0
17	917	16.516	341.1	117	2	1	24	6	42	0
18	918	16.169	340.3	118	-4	1	24	6	42	0
19	919	15.858	339.5	119	0	1	24	6	42	0
20	920	15.527	338.7	120	-6	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   8   TEAM 1
SHOT POINT 12
SHOT TIME: 157: 6:15: 0.008

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	31.131	170.7	1	18	2	24	6	62	0
2	1002	31.524	170.8	2	-35	2	24	6	42	0
3	1003	31.917	170.9	3	8	2	24	6	42	0
4	1004	32.333	171.0	4	-2	2	24	6	42	0
5	1005	32.699	171.1	5	47	2	24	6	42	0
6	1006	33.126	171.2	6	10		24	6	42	2
7	1007	33.485	171.3	7	-6	2	24	6	42	0
8	1008	33.873	171.4	8	52	2	24	6	42	0
9	1009	34.266	171.5	9	-7	2	24	6	42	0
10	1010	34.678	171.6	10	-13		24	6	42	2
11	1011	35.048	171.7	11	38	2	24	6	42	0
12	1012	35.446	171.8	12	0	2	24	6	42	0
13	1013	35.830	171.9	13	-3	2	24	6	42	0
14	1014	36.321	172.0	14	505	2	24	6	62	0
15	1015	36.660	172.1	15	-5	2	24	6	62	0
16	1016	37.089	172.2	16	7		24	6	82	2
17	1017	37.466	172.3	17	34	2	24	6	82	0
18	1018	37.911	172.4	18	5	2	24	6	82	0
19	1019	46.716	171.5	19	46		24	6	82	21
20	1020	47.106	171.5	20	-19		24	6	82	17

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   8   TEAM 2
SHOT POINT 12
SHOT TIME: 157: 6:15: 0.008

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	6.358	180.3	21	4	1	24	6	42	0
2	922	6.115	177.4	22	8	1	24	6	42	0
3	923	5.895	174.4	23	14		24	6	42	21
4	924	5.764	170.7	24	-12	3	24	6	42	0
5	925	5.765	166.1	25	--		24	6	42	1
6	926	5.686	162.2	26	5		24	6	42	17
7	927	5.472	159.0	27	-24	1	24	6	42	0
8	928	5.169	156.3	28	--		24	6	42	1
9	929	4.857	153.9	29	9	1	24	6	42	0
10	930	4.579	150.8	30	3	3	24	6	42	0
11	931	4.474	146.1	31	9	3	24	6	42	0
12	932	4.361	141.4	32	-4	3	24	6	42	0
13	933	6.386	156.0	33	-96	1	24	6	42	0
14	934	6.685	158.2	34	3	1	24	6	42	0
15	935	7.016	160.0	35	-101		24	6	42	1
16	936	7.358	161.5	36	-7	3	24	6	42	0
17	937	7.725	162.6	37	--		24	6	42	1
18	938	8.084	163.7	38	2	3	24	6	42	0
19	939	8.486	164.8	39	7	3	24	6	42	0
20	940	8.768	165.9	40	4	3	24	6	42	1

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 8 TEAM 3
SHOT POINT 12
SHOT TIME: 157: 6:15: 0.008

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	9.263	167.2	41	8		24	6	42	1
2	942	9.605	168.2	42	0	3	24	6	42	0
3	943	9.965	169.1	43	-25		24	6	42	1
4	944	10.337	169.9	44	-24	3	24	6	42	0
5	945	10.705	170.5	45	3	3	24	6	42	0
6	946	11.072	171.2	46	-61	3	24	6	42	12
7	947	11.461	171.6	47	40	3	24	6	42	21
8	948	11.846	171.3	48	-44		24	6	82	1
9	949	12.211	170.7	49	2	1	24	6	42	0
10	950	12.598	170.4	50	-4	1	24	6	42	0
11	951	12.906	169.5	51	4	1	24	6	42	0
12	952	13.255	168.7	52	-20	1	24	6	42	0
13	953	13.487	168.3	53	4	1	24	6	42	0
14	954	13.843	167.8	54	-16	1	24	6	42	0
15	955	14.286	167.2	55	-16	1	24	6	42	0
16	956	14.757	166.8	56	-3	1	24	6	82	0
17	957	15.120	166.3	57	-46		24	6	42	1
18	958	15.478	165.6	58	-6	1	24	6	42	0
19	959	15.842	165.1	59	-5		24	6	42	1
20	960	16.212	164.6	60	-7	1	24	6	42	12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 8 TEAM 4
SHOT POINT 12
SHOT TIME: 157: 6:15: 0.008

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	16.569	164.1	61	10	1	24	6	42	0
2	962	16.956	163.9	62	9	1	24	6	42	0
3	963	17.344	163.9	63	9		24	6	42	1
4	964	17.702	164.4	64	12	1	24	6	42	0
5	965	18.070	164.8	65	0		24	6	42	1
6	966	18.416	165.4	66	-7	1	24	6	42	0
7	967	18.784	165.8	67	-24	1	24	6	62	0
8	968	19.145	166.2	68	-16	1	24	6	62	0
9	969	19.533	166.6	69	5	1	24	6	82	0
10	970	19.911	167.0	70	9	1	24	6	82	0
11	971	20.222	167.2	71	-17	1	24	6	82	0
12	972	20.581	165.6	72	12	1	24	6	82	0
13	973	20.835	165.7	73	-2	1	24	6	82	0
14	974	21.161	166.2	74	0	1	24	6	62	0
15	975	21.449	166.9	75	10	1	24	6	62	0
16	976	21.718	167.6	76	-3	1	24	6	42	0
17	977	22.002	167.9	77	-3	1	24	6	42	0
18	978	22.363	168.1	78	--	1	24	6	42	0
19	979	22.685	168.7	79	8	1	24	6	42	0
20	980	23.011	169.1	80	12	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   8   TEAM 5
SHOT POINT   12
SHOT TIME: 157: 6:15: 0.008

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	23.323	169.4	81	-17	1	24	6	42	0
2	982	23.734	169.4	82	9		24	6	42	21
3	983	24.049	169.9	83	9	1	24	6	42	0
4	984	24.426	170.1	84	9	1	24	6	42	0
5	985	24.787	170.3	85	-44	1	24	6	42	12
6	986	25.163	170.5	86	-40	2	24	6	42	0
7	987	25.519	170.8	87	6	2	24	6	42	0
8	988	25.889	170.6	88	19	2	24	6	42	0
9	989	26.250	170.4	89	9	2	24	6	42	0
10	990	26.615	170.3	90	0	2	24	6	42	0
11	991	27.008	170.3	91	10	2	24	6	42	0
12	992	27.392	170.5	92	5	2	24	6	42	0
13	993	27.777	170.6	93	-10	2	24	6	42	0
14	994	28.171	170.5	94	8	2	24	6	42	0
15	995	28.839	170.1	95	21		24	6	82	6
16	996	29.232	170.0	96	-25	2	24	6	82	0
17	997	29.624	170.2	97	7	2	24	6	82	0
18	998	29.969	170.3	98	11	2	24	6	82	0
19	999	30.353	170.4	99	4		24	6	82	3
20	1000	30.750	170.6	100	7	2	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   8   TEAM 6
SHOT POINT   12
SHOT TIME: 157: 6:15: 0.008

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	0.126	51.5	101	16		24	6	82	17
2	902	0.576	34.3	102	3		24	6	82	1
3	903	0.956	30.3	103	11	3	24	6	82	0
4	904	1.335	34.4	104	0	3	24	6	82	21
5	905	8.610	345.9	105	14		24	6	62	21
6	906	8.672	346.8	106	-14		24	6	62	21
7	907	0.2[illegible]	171.1	107	-7	1	24	6	82	0
8	908	0.643	171.4	108	9	2	24	6	82	21
9	909	1.022	179.9	109	2	3	24	6	82	0
10	910	1.405	184.8	110	20	3	24	6	62	0
11	911	1.795	186.3	111	-3	3	24	6	62	0
12	912	2.188	188.0	112	-8	3	24	6	62	0
13	913	2.584	189.0	113	-8	3	24	6	42	0
14	914	2.975	189.6	114	1	3	24	6	42	0
15	915	3.370	189.9	115	-5	3	24	6	42	0
16	916	3.765	190.3	116	7	3	24	6	42	0
17	917	4.160	190.6	117	2	3	24	6	42	0
18	918	4.574	190.9	118	-4	3	24	6	42	0
19	919	4.956	191.3	119	0	3	24	6	42	0
20	920	5.346	191.2	120	-6	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 9 TEAM 1
SHOT POINT 16
SHOT TIME: 157: 6:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	1.223	180.2	1	18	3	24	6	62	0
2	1002	1.620	180.0	2	-36	3	24	6	42	0
3	1003	2.018	180.0	3	8	3	24	6	42	0
4	1004	2.440	180.0	4	-2	3	24	6	42	0
5	1005	2.810	180.0	5	48	3	24	6	42	0
6	1006	3.243	180.0	6	10		24	6	42	1
7	1007	3.605	180.0	7	-6	3	24	6	42	0
8	1008	3.997	180.0	8	53	3	24	6	42	0
9	1009	4.395	180.0	9	-7	3	24	6	42	0
10	1010	4.811	180.0	10	-13		24	6	42	1
11	1011	5.186	180.1	11	38	3	24	6	42	0
12	1012	5.588	180.0	12	0	3	24	6	42	0
13	1013	5.974	179.9	13	-3	3	24	6	42	0
14	1014	6.472	180.0	14	516	1	24	6	62	0
15	1015	6.814	180.0	15	-5	1	24	6	62	0
16	1016	7.247	180.0	16	7		24	6	82	1
17	1017	7.628	180.0	17	34	1	24	6	82	0
18	1018	8.077	180.0	18	5	1	24	6	82	0
19	1019	16.807	173.6	19	46		24	6	82	21
20	1020	17.200	173.7	20	-19		24	6	82	17

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 9 TEAM 2
SHOT POINT 16
SHOT TIME: 157: 6:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	23.692	347.6	21	5	2	24	6	82	0
2	922	23.870	348.5	22	8	2	24	6	82	0
3	923	24.050	349.3	23	14		24	6	82	2
4	924	24.162	350.2	24	-13	2	24	6	42	0
5	925	24.180	351.3	25	--		24	6	82	1
6	926	24.309	352.2	26	5		24	6	82	0
7	927	24.583	352.8	27	-24	2	24	6	82	0
8	928	24.940	353.2	28	--		24	6	82	1
9	929	25.304	353.4	29	10	2	24	6	82	0
10	930	25.655	353.7	30	3	2	24	6	42	15
11	931	25.908	354.3	31	9	2	24	6	42	0
12	932	26.194	354.9	32	-4	2	24	6	42	0
13	933	23.789	354.1	33	-97	2	24	6	42	0
14	934	23.431	353.7	34	3	2	24	6	42	0
15	935	23.057	353.4	35	-102		24	6	42	2
16	936	22.682	353.1	36	-7	2	24	6	42	0
17	937	22.294	352.9	37	--		24	6	82	1
18	938	21.914	352.7	38	2	2	24	6	42	24
19	939	21.494	352.4	39	7	2	24	6	42	0
20	940	21.193	352.1	40	5	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 9 TEAM 3
SHOT-POINT 16
SHOT TIME: 157: 6:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	20.682	351.7	41	8		24	6	42	25
2	942	20.331	351.3	42	0	2	24	6	42	0
3	943	19.964	350.9	43	-25		24	6	42	1
4	944	19.589	350.5	44	-25	2	24	6	42	0
5	945	19.221	350.2	45	3	2	24	6	42	0
6	946	18.856	349.8	46	-62	2	24	6	42	12
7	947	18.469	349.5	47	40	2	24	6	42	25
8	948	18.083	349.6	48	-45		24	6	82	1
9	949	17.716	350.0	49	2	2	24	6	42	0
10	950	17.328	350.2	50	-4	2	24	6	42	0
11	951	17.023	350.9	51	4	2	24	6	42	0
12	952	16.681	351.6	52	-20	2	24	6	42	0
13	953	16.453	351.9	53	4	1	24	6	42	0
14	954	16.107	352.4	54	-16	1	24	6	42	0
15	955	15.679	353.1	55	-17	1	24	6	42	0
16	956	15.222	353.7	56	-3	1	24	6	82	0
17	957	14.879	354.3	57	-46		24	6	42	1
18	958	14.553	355.3	58	-6	1	24	6	42	0
19	959	14.220	356.1	59	-5		24	6	42	1
20	960	13.885	356.9	60	-7	1	24	6	42	12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 9 TEAM 4
SHOT POINT 16
SHOT TIME: 157: 6:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	13.570	357.8	61	10	1	24	6	42	0
2	962	13.213	358.6	62	9	1	24	6	42	0
3	963	12.839	359.0	63	9		24	6	42	1
4	964	12.452	358.7	64	12	1	24	6	42	0
5	965	12.062	358.5	65	0		24	6	42	1
6	966	11.684	358.1	66	-7	1	24	6	42	0
7	967	11.294	357.7	67	-24	1	24	6	62	0
8	968	10.913	357.4	68	-16	1	24	6	62	0
9	969	10.508	357.2	69	5	1	24	6	82	0
10	970	10.115	356.9	70	9	1	24	6	82	0
11	971	9.791	356.6	71	-17	1	24	6	82	0
12	972	9.560	0.4	72	12	1	24	6	82	0
13	973	9.307	0.6	73	-2	1	24	6	82	0
14	974	8.946	360.0	74	0	1	24	6	62	0
15	975	8.609	358.8	75	10	1	24	6	62	0
16	976	8.296	357.4	76	-3	3	24	6	42	0
17	977	7.995	356.8	77	-3	1	24	6	42	0
18	978	7.627	356.7	78	--	1	24	6	42	0
19	979	7.278	355.3	79	8	1	24	6	42	0
20	980	6.935	354.1	80	12	1	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   9 TEAM 5
SHOT POINT 16
SHOT TIME: 157: 6:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	6.616	353.4	81	-17	1	24	6	42	0
2	982	6.205	353.6	82	9		24	6	42	21
3	983	5.880	352.1	83	9	1	24	6	42	25
4	984	5.500	351.2	84	9	1	24	6	42	0
5	985	5.139	350.1	85	-45	1	24	6	42	12
6	986	4.764	349.0	86	-41	1	24	6	42	0
7	987	4.414	347.4	87	6	3	24	6	42	0
8	988	4.040	348.4	88	19	1	24	6	42	0
9	989	3.676	349.8	89	9	3	24	6	42	0
10	990	3.311	349.8	90	0	3	24	6	42	0
11	991	2.918	350.5	91	10	3	24	6	42	0
12	992	2.536	348.4	92	6	2	24	6	42	0
13	993	2.154	346.4	93	-10	3	24	6	42	0
14	994	1.758	346.6	94	8	1	24	6	42	0
15	995	1.091	355.1	95	22		24	6	82	6
16	996	0.705	0.3	96	-25	1	24	6	82	0
17	997	0.307	0.1	97	7	1	24	6	82	0
18	998	0.045	184.4	98	11	1	24	6	82	0
19	999	0.435	181.1	99	4	1	24	6	82	0
20	1000	0.836	180.1	100	7	1	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   9 TEAM 6
SHOT POINT 16
SHOT TIME: 157: 6:30: 0.009

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	29.987	350.5	101	16	2	24	6	82	0
2	902	30.343	351.0	102	3		24	6	82	1
3	903	30.664	351.4	103	11	2	24	6	82	0
4	904	30.898	352.0	104	-2	2	24	6	82	0/25
5	905	38.517	349.3	105	14		24	6	62	21
6	906	38.586	349.5	106	-15		24	6	62	21
7	907	29.662	350.3	107	-7	2	24	6	82	0
8	908	29.283	350.3	108	9	2	24	6	82	0/25
9	909	28.918	350.0	109	2	2	24	6	82	0
10	910	28.569	349.6	110	20	2	24	6	62	0
11	911	28.205	349.3	111	-3	2	24	6	62	0
12	912	27.849	348.9	112	-8	2	24	6	62	25
13	913	27.492	348.6	113	-8	2	24	6	42	0
14	914	27.138	348.2	114	1	2	24	6	42	0
15	915	26.776	347.9	115	-5	2	24	6	42	0
16	916	26.421	347.5	116	7	2	24	6	42	0
17	917	26.065	347.1	117	2		24	6	42	0
18	918	25.695	346.7	118	-4	2	24	6	42	0
19	919	25.361	346.3	119	0	1	24	6	42	0
20	920	25.007	345.9	120	-6	2	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 10 TEAM 1
SHOT POINT 14
SHOT TIME: 157: 8:30: 0.005

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	1001	17.722	172.3	1	19	1	24	6	62	0
2	1002	18.116	172.5	2	-38	1	24	6	42	0
3	1003	18.511	172.6	3	8	1	24	6	42	0
4	1004	18.929	172.8	4	-2	1	24	6	42	0
5	1005	19.296	172.9	5	51	1	24	6	42	0
6	1006	19.726	173.1	6	11		24	6	42	1
7	1007	20.086	173.2	7	-6	1	24	6	42	0
8	1008	20.475	173.3	8	56		24	6	42	2
9	1009	20.870	173.5	9	-8	1	24	6	42	0
10	1010	21.284	173.6	10	-14		24	6	42	1
11	1011	21.656	173.7	11	41	1	24	6	42	0
12	1012	22.056	173.8	12	1	1	24	6	42	0
13	1013	22.440	173.9	13	-3	1	24	6	42	0
14	1014	22.934	174.0	14	600	1	24	6	62	0
15	1015	23.274	174.1	15	-5	1	24	6	62	0
16	1016	23.706	174.2	16	7	1	24	6	82	0
17	1017	24.084	174.3	17	37	1	24	6	82	0
18	1018	24.531	174.4	18	5	1	24	6	82	0
19	1019	33.314	172.7	19	49		24	6	82	21
20	1020	33.706	172.7	20	-20		24	6	82	17

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12 NEVADA
SHOT NUMBER 10 TEAM 2
SHOT POINT 14
SHOT TIME: 157: 8:30: 0.005

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	921	7.318	338.3	21	5	1	24	6	82	0
2	922	7.443	341.3	22	8	1	24	6	82	0
3	923	7.586	344.0	23	15		24	6	82	2
4	924	7.669	346.9	24	-13	3	24	6	42	17
5	925	7.670	350.4	25	--		24	6	82	1
6	926	7.799	353.1	26	5		24	6	82	25
7	927	8.081	355.0	27	-26	1	24	6	82	0
8	928	8.444	356.0	28	--		24	6	82	1
9	929	8.813	356.6	29	10	1	24	6	82	0
10	930	9.172	357.3	30	3	3	24	6	42	0/15
11	931	9.445	359.0	31	10	3	24	6	42	0
12	932	9.752	0.3	32	-4		24	6	42	1
13	933	7.323	359.4	33	-103	1	24	6	42	0
14	934	6.954	358.5	34	3	1	24	6	42	0
15	935	6.572	357.7	35	-109		24	6	42	2
16	936	6.189	356.9	36	-7	3	24	6	42	0
17	937	5.797	356.5	37	--		24	6	82	1
18	938	5.413	355.7	38	2		24	6	42	24
19	939	4.988	354.9	39	7	3	24	6	42	0
20	940	4.683	353.4	40	5	3	24	6	42	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   10   TEAM 3
SHOT POINT   14
SHOT TIME: 157: 8:30: 0.005

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	941	4.170	351.4	41	9		24	6	42	21
2	942	3.822	349.4	42	0	3	24	6	42	0
3	943	3.463	346.9	43	-27		24	6	42	1
4	944	3.101	344.0	44	-27	3	24	6	42	0
5	945	2.753	340.8	45	3	3	24	6	42	0
6	946	2.421	336.3	46	-67	3	24	6	42	12
7	947	2.071	331.5	47	43	3	24	6	42	25
8	948	1.692	328.9	48	-48		24	6	82	1
9	949	1.306	328.1	49	2	1	24	6	42	0
10	950	0.927	322.7	50	-5	1	24	6	42	0
11	951	0.561	327.1	51	4	3	24	6	42	0
12	952	0.174	338.4	52	-21	3	24	6	42	0
13	953	0.077	131.3	53	4	3	24	6	42	0
14	954	0.454	145.2	54	-18	3	24	6	42	0
15	955	0.918	147.6	55	-18	3	24	6	42	0
16	956	1.396	150.1	56	-3	3	24	6	82	0
17	957	1.784	149.2	57	-50		24	6	42	1
18	958	2.180	147.3	58	-6	3	24	6	42	0
19	959	2.570	146.9	59	-5		24	6	42	1
20	960	2.963	146.6	60	-7	3	24	6	42	12

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   10   TEAM 4
SHOT POINT   14
SHOT TIME: 157: 8:30: 0.005

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	961	3.347	146.1	61	10	3	24	6	42	0
2	962	3.740	146.8	62	10	3	24	6	42	0
3	963	4.113	148.4	63	9		24	6	42	1
4	964	4.420	151.7	64	13	3	24	6	42	0
5	965	4.754	154.2	65	0		24	6	42	1
6	966	5.065	157.0	66	-7	3	24	6	42	0
7	967	5.411	159.1	67	-26		24	6	62	21
8	968	5.756	160.9	68	-17	3	24	6	62	0
9	969	6.132	162.4	69	5	1	24	6	82	0
10	970	6.501	163.7	70	9	1	24	6	82	0
11	971	6.807	164.7	71	-19	1	24	6	82	0
12	972	7.204	160.2	72	13	1	24	6	82	0
13	973	7.456	160.6	73	-2	1	24	6	82	0
14	974	7.766	162.2	74	0	1	24	6	62	0
15	975	8.038	164.1	75	11	1	24	6	62	0
16	976	8.297	166.0	76	-3	3	24	6	42	0
17	977	8.578	167.0	77	-3	3	24	6	42	0
18	978	8.938	167.5	78	--	3	24	6	42	0
19	979	9.260	168.9	79	9	3	24	6	42	0
20	980	9.587	170.0	80	13		24	6	42	21

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   10 TEAM 5
SHOT POINT 14
SHOT TIME: 157: 8:30: 0.005

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	981	9.900	170.6	81	-19	3	24	6	42	0
2	982	10.312	170.6	82	9		24	6	42	1
3	983	10.631	171.5	83	10	3	24	6	42	25
4	984	11.011	172.0	84	10		24	6	42	21
5	985	11.375	172.4	85	-48	3	24	6	42	12
6	986	11.754	172.8	86	-44	3	24	6	42	0
7	987	12.115	173.3	87	7	3	24	6	42	0
8	988	12.480	172.8	88	20	1	24	6	42	0
9	989	12.838	172.3	89	10	1	24	6	42	0
10	990	13.203	172.2	90	0	1	24	6	42	0
11	991	13.594	172.0	91	11	1	24	6	42	0
12	992	13.981	172.3	92	6		24	6	42	21
13	993	14.368	172.5	93	-11	1	24	6	42	0
14	994	14.761	172.3	94	9	1	24	6	42	17
15	995	15.422	171.5	95	23		24	6	82	6
16	996	15.815	171.3	96	-27	1	24	6	82	0
17	997	16.208	171.6	97	7	1	24	6	82	0
18	998	16.555	171.7	98	12	1	24	6	82	0
19	999	16.941	172.0	99	4	1	24	6	82	0
20	1000	17.339	172.1	100	7	1	24	6	82	0

DKDAT FIELD DATA TABLE

EXPERIMENT NO. 12   NEVADA
SHOT NUMBER   10 TEAM 6
SHOT POINT 14
SHOT TIME: 157: 8:30: 0.005

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	701	13.483	349.0	101	17	1	24	6	82	0
2	902	13.834	350.3	102	3		24	6	82	1
3	903	14.153	351.1	103	12	1	24	6	82	0
4	904	14.387	352.4	104	-2	1	24	6	82	0
5	905	22.030	347.5	105	15		24	6	62	21
6	906	22.095	347.9	106	-16		24	6	62	21
7	907	13.162	348.5	107	-8	1	24	6	82	0
8	908	12.784	348.4	108	9		24	6	82	21
9	909	12.425	347.6	109	3	1	24	6	82	0
10	910	12.084	346.7	110	22	1	24	6	62	0
11	911	11.729	345.9	111	-3		24	6	62	21
12	912	11.386	344.9	112	-8		24	6	62	21
13	913	11.043	343.8	113	-8	3	24	6	42	0
14	914	10.704	342.8	114	1	3	24	6	42	0
15	915	10.361	341.7	115	-5	3	24	6	42	0
16	916	10.028	340.5	116	7	3	24	6	42	0
17	917	9.697	339.3	117	2	3	24	6	42	0
18	918	9.358	337.8	118	-5	3	24	6	42	0
19	919	9.059	336.3	119	0	3	24	6	42	0
20	920	8.741	334.9	120	-7		24	6	42	21

APPENDIX C

FIRST-ARRIVAL TIMES (pp 49-61)

Columnized information includes shotpoint number, seismograph location number, travel-time picks in real time (difference between chronometer reading and origin time of shot) and reduced time (T - x/6; x is distance), and distance (km) and azimuth (degrees from North) of the seismograph from the shot point.

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
11	701	0	2.143	0.698	8.669	165.600
11	903	0	1.969	0.626	8.060	161.600
11	904	0	1.918	0.603	7.892	159.100
11	907	0	2.155	0.658	8.984	166.500
11	909	1	2.379	0.759	9.718	167.700
11	913	1	2.612	0.753	11.150	171.500
11	914	1	2.687	0.768	11.514	172.200
11	915	0	2.758	0.777	11.886	172.800
11	916	0	2.834	0.791	12.257	173.500
11	917	1	2.914	0.809	12.630	174.100
11	918	1	2.999	0.829	13.021	174.700
11	919	2	3.082	0.852	13.380	175.300
11	921	1	3.356	0.861	14.970	172.200
11	922	1	3.317	0.855	14.770	170.900
11	926	1	3.243	0.843	14.398	164.700
11	927	1	3.204	0.843	14.165	163.500
11	929	1	3.103	0.852	13.504	161.900
11	930	1	3.044	0.846	13.189	161.000
11	932	0	2.949	0.814	12.807	158.100
11	933	0	3.342	0.835	15.047	162.000
11	934	1	3.448	0.387	15.368	162.800
11	936	0	3.588	0.910	16.065	164.100
11	939	2	3.754	0.887	17.205	165.600
11	940	2	3.807	0.893	17.489	166.100
11	944	3	4.073	0.898	19.049	168.300
11	946	3	4.191	0.896	19.776	169.100
11	947	3	4.256	0.896	20.162	169.300
11	949	3	4.338	0.852	20.917	168.900
11	950	3	4.403	0.852	21.307	168.700
11	951	3	4.455	0.852	21.619	168.200
11	952	4	4.514	0.852	21.971	167.700
11	953	4	4.550	0.849	22.205	167.600
11	954	4	4.612	0.852	22.563	167.200
11	955	4	4.686	0.852	23.006	166.900
11	958	4	4.874	0.840	24.199	165.900
11	960	4	4.995	0.840	24.930	165.200
11	961	4	5.066	0.852	25.286	164.900
11	962	4	5.160	0.881	25.672	164.700
11	964	4	5.302	0.898	26.419	165.000
11	966	4	5.421	0.898	27.136	165.700
12	903	3	0.446	0.287	-0.956	30.300
12	904	3	0.556	0.333	-1.335	34.400
12	907	0	0.102	0.058	0.264	171.100
12	908	3	0.342	0.235	0.643	171.400
12	909	3	0.451	0.281	1.022	179.900
12	910	2	0.695	0.461	1.405	184.800
12	911	2	0.786	0.487	1.795	186.300
12	912	2	0.886	0.522	2.188	188.000
12	913	2	1.007	0.577	2.584	189.000
12	914	2	1.072	0.577	2.975	189.600
12	915	2	1.153	0.591	3.370	189.900
12	916	3	1.230	0.603	3.765	190.300
12	917	3	1.348	0.655	4.160	190.600
12	919	3	1.661	0.835	4.956	191.300
12	921	2	2.013	0.953	6.358	180.300
12	922	2	1.944	0.924	6.115	177.400
12	927	2	1.793	0.881	5.472	159.000
12	929	2	1.647	0.838	4.857	153.900
12	930	3	1.580	0.817	4.579	150.800
12	931	3	1.543	0.797	4.474	146.100
12	932	3	1.483	0.756	4.361	141.400
12	933	2	2.018	0.953	6.386	156.000
12	934	2	2.123	1.009	6.685	158.200
12	936	2	2.276	1.049	7.358	161.500
12	939	1	2.547	1.133	8.486	164.800
12	940	2	2.644	1.182	8.768	165.900
12	942	1	2.806	1.206	9.605	168.200
12	944	1	2.946	1.223	10.337	169.900
12	945	1	3.019	1.235	10.705	170.500
12	946	1	3.103	1.258	11.072	171.200
12	947	2	3.177	1.267	11.461	171.600
12	949	1	3.305	1.269	12.211	170.700
12	950	1	3.389	1.290	12.598	170.400
12	951	1	3.441	1.290	12.906	169.500
12	952	1	3.496	1.287	13.255	168.700

FIRST-ARRIVAL TIMES: EAST-WEST PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
12	701	0	0.024	0.003	-0.126	51.500
12	703	2	0.494	0.368	-0.755	328.200
12	704	4	0.662	0.475	-1.123	323.200
12	705	0	0.766	0.513	-1.520	321.100
12	708	0	1.045	0.629	-2.497	303.700
12	709	0	1.114	0.658	-2.738	297.700
12	710	1	1.205	0.701	-3.024	292.600
12	714	2	1.591	0.849	-4.452	284.800
12	716	0	1.793	0.927	-5.196	281.600
12	717	1	1.863	0.936	-5.560	279.300
12	718	1	1.932	0.956	-5.854	277.100
12	719	1	2.025	0.985	-6.240	277.000
12	720	1	2.086	0.985	-6.603	275.700
12	721	1	2.073	0.916	-6.945	274.000
12	722	1	2.108	0.907	-7.205	272.200
12	723	1	2.069	0.861	-7.249	269.100
12	725	2	2.105	0.809	-7.779	264.800
12	726	2	2.129	0.791	-8.027	262.800
12	727	2	2.165	0.791	-8.243	260.600
12	728	1	2.215	0.791	-8.546	259.000
12	729	1	2.275	0.788	-8.922	258.200
12	730	2	2.342	0.788	-9.321	257.600
12	731	2	2.378	0.768	-9.658	256.100
12	734	2	2.478	0.722	-10.536	252.000
12	735	2	2.542	0.722	-10.921	251.300
12	736	2	2.588	0.698	-11.337	252.000
12	739	3	2.857	0.785	-12.432	251.700
12	742	3	2.997	0.748	-13.493	256.200
12	743	3	3.046	0.748	-13.793	257.600
12	744	2	2.974	0.620	-14.120	258.300
12	745	3	2.980	0.562	-14.509	258.700
12	746	3	3.017	0.533	-14.906	258.600
12	749	2	3.384	0.698	-16.114	258.600
12	750	2	3.433	0.681	-16.513	258.600
12	751	3	3.494	0.675	-16.913	258.600
12	752	2	3.645	0.655	-17.939	256.000
12	754	2	3.755	0.655	-18.598	257.400
12	756	2	3.895	0.655	-19.440	257.100
12	757	2	3.943	0.655	-19.729	257.000
12	759	2	4.175	0.777	-20.390	258.200
12	760	2	4.225	0.748	-20.865	258.400
12	761	2	4.252	0.745	-21.044	259.200
12	763	2	4.379	0.745	-21.806	260.100
12	765	2	4.493	0.745	-22.492	259.900
12	766	2	4.562	0.730	-22.988	259.900
12	767	3	4.607	0.719	-23.328	260.400
12	768	2	4.684	0.745	-23.637	261.000
12	769	2	4.739	0.745	-23.965	261.600
12	770	2	4.808	0.751	-24.345	261.700
12	771	2	4.880	0.756	-24.741	261.700
12	772	1	4.986	0.797	-25.136	261.600
12	774	1	5.103	0.785	-25.907	262.000
12	775	1	5.178	0.800	-26.270	262.200
12	776	1	5.241	0.800	-26.649	262.500
12	777	1	5.305	0.800	-27.031	262.700
12	778	1	5.358	0.791	-27.402	262.900
12	779	1	5.420	0.794	-27.758	263.300
12	780	1	5.483	0.800	-28.097	263.500
12	781	1	5.532	0.742	-28.738	263.800
12	782	1	5.581	0.727	-29.124	264.000
12	783	1	5.666	0.745	-29.525	264.100
12	784	2	5.761	0.780	-29.888	263.800
12	785	3	5.800	0.759	-30.247	264.000
12	786	2	5.895	0.794	-30.608	264.400
12	787	2	5.938	0.777	-30.968	264.600
12	788	2	6.027	0.806	-31.328	264.800
12	789	2	6.089	0.820	-31.614	265.300
12	790	2	6.145	0.809	-32.016	265.600
12	791	2	6.196	0.791	-32.430	265.700
12	793	1	6.549	1.017	-33.191	255.800
12	794	2	6.685	1.011	-34.040	256.000
12	795	2	6.801	0.985	-34.897	256.300
12	796	2	6.893	0.965	-35.568	256.700
12	797	1	7.064	0.948	-36.699	255.200
12	798	1	7.180	0.948	-37.397	254.800
12	799	1	7.295	0.867	-38.573	254.000

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
12	953	1	3.535	1.287	13.487	168.300
12	954	1	3.626	1.319	13.843	167.800
12	955	1	3.697	1.316	14.286	167.200
12	956	1	3.738	1.278	14.757	166.800
12	958	2	3.835	1.255	15.478	165.600
12	960	2	4.024	1.322	16.212	164.600
12	961	2	4.031	1.269	16.569	164.100
12	962	2	4.020	1.194	16.956	163.900
12	964	2	4.127	1.177	17.702	164.400
12	966	3	4.156	1.087	18.416	165.400
12	967	3	4.246	1.116	18.784	165.800
12	968	2	4.307	1.116	19.145	166.200
12	969	3	4.371	1.116	19.533	166.600
12	970	3	4.434	1.116	19.911	167.000
12	971	3	4.486	1.116	20.222	167.200
12	972	3	4.546	1.116	20.581	165.600
12	974	3	4.643	1.116	21.161	166.200
12	975	3	4.691	1.116	21.449	166.900
12	976	3	4.735	1.116	21.718	167.600
12	977	3	4.728	1.061	22.002	167.900
12	978	3	4.811	1.084	22.363	168.100
12	979	3	4.850	1.069	22.685	168.700
12	980	3	4.905	1.069	23.011	169.100
12	981	3	4.980	1.093	23.323	169.400
12	986	4	5.304	1.110	25.163	170.500
12	987	4	5.273	1.020	25.519	170.800
12	988	4	5.332	1.017	25.889	170.600
12	990	4	5.433	0.997	26.615	170.300
12	991	4	5.498	0.997	27.008	170.300
12	993	4	5.711	1.081	27.777	170.600

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
13	701	0	1.797	0.832	-5.792	351.400
13	903	1	1.925	0.843	-6.492	355.700
13	904	1	1.998	0.872	-6.753	358.200
13	907	0	1.653	0.742	-5.467	350.200
13	909	1	1.448	0.661	-4.726	348.200
13	910	1	1.392	0.661	-4.385	345.700
13	911	1	1.333	0.661	-4.036	343.200
13	914	1	1.085	0.571	-3.086	331.600
13	915	1	1.037	0.571	-2.796	326.400
13	916	1	0.966	0.542	-2.545	319.800
13	917	1	0.927	0.539	-2.331	312.000
13	918	1	0.909	0.548	-2.165	302.300
13	919	1	0.870	0.522	-2.089	292.100
13	921	2	0.602	0.397	1.231	234.800
13	922	1	0.488	0.351	0.826	236.200
13	924	0	-0.038	-0.047	0.050	219.400
13	926	1	0.481	0.348	-0.801	73.100
13	927	2	0.574	0.385	-1.131	61.500
13	929	3	0.707	0.417	-1.741	42.300
13	930	1	0.846	0.498	-2.083	37.500
13	930	1	0.843	0.496	-2.083	37.500
13	931	1	0.958	0.548	-2.464	38.300
13	932	1	1.043	0.568	-2.848	38.100
13	933	1	0.766	0.493	1.639	96.500
13	934	0	0.794	0.524	1.617	110.200
13	936	0	0.874	0.556	1.908	134.200
13	939	1	1.066	0.594	2.834	153.700
13	940	0	1.146	0.632	3.085	157.900
13	944	1	1.539	0.771	4.607	169.400
13	946	1	1.725	0.835	5.343	172.200
13	947	1	1.825	0.869	5.734	172.900
13	949	0	2.019	0.939	6.480	171.000
13	950	0	2.118	0.974	6.868	170.500
13	951	0	2.187	0.991	7.176	168.800
13	952	1	2.252	0.997	7.528	167.400
13	953	1	2.323	1.029	7.762	166.900
13	954	1	2.432	1.078	8.122	166.000
13	955	1	2.544	1.116	8.569	165.200
13	956	1	2.591	1.084	9.044	164.600
13	958	2	2.722	1.093	9.778	162.900
13	960	2	2.890	1.136	10.524	161.600
13	961	2	2.989	1.174	10.889	160.900
13	962	2	3.048	1.168	11.280	160.600
13	964	2	3.142	1.139	12.016	161.600
13	966	2	3.177	1.058	12.716	163.200
13	967	2	3.232	1.052	13.078	163.900
13	968	2	3.285	1.046	13.435	164.500
13	970	2	3.455	1.090	14.194	165.600
13	971	2	3.513	1.096	14.503	166.000
13	972	2	3.552	1.072	14.876	163.900
13	973	2	3.594	1.072	15.130	164.000
13	974	2	3.659	1.084	15.450	164.700
13	975	2	3.726	1.104	15.732	165.700
13	976	3	3.747	1.081	15.996	166.600
13	977	2	3.794	1.081	16.278	167.100
13	978	2	3.854	1.081	16.638	167.400
13	979	2	3.881	1.055	16.958	168.100
13	980	2	3.958	1.078	17.282	168.800
13	981	3	4.010	1.078	17.593	169.100
13	983	2	4.079	1.026	18.319	169.700
13	986	3	4.192	0.953	19.432	170.600
13	987	3	4.286	0.988	19.789	170.900
13	988	3	4.316	0.956	20.158	170.700
13	989	3	4.379	0.959	20.519	170.400
13	990	3	4.440	0.959	20.885	170.400
13	993	3	4.634	0.959	22.047	170.700
13	994	3	4.699	0.959	22.441	170.600
13	996	3	4.989	1.072	23.502	170.000
13	997	3	5.054	1.072	23.893	170.200
13	998	4	5.156	1.116	24.239	170.300
13	1000	4	5.303	1.133	25.020	170.600
13	1002	2	5.429	1.130	25.794	170.900
13	1003	2	5.495	1.130	26.187	171.000
13	1004	3	5.544	1.110	26.603	171.200
13	1005	3	5.605	1.110	26.969	171.300
13	1007	3	5.739	1.113	27.756	171.500
13	1009	3	5.869	1.113	28.537	171.800
13	1011	2	5.982	1.096	29.320	172.000

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
13	1012	2	6.049	1.096	29.718	172.100
13	1012	3	6.060	1.107	29.718	172.100
13	1013	3	6.124	1.107	30.102	172.200
13	1015	3	6.207	1.052	30.932	172.400
13	1017	3	6.403	1.113	31.740	172.600
13	1018	3	6.509	1.145	32.185	172.700
14	701	1	3.546	1.298	-13.483	349.000
14	903	1	3.657	1.298	-14.153	351.100
14	904	1	3.664	1.267	-14.387	352.400
14	907	1	3.423	1.229	-13.162	348.500
14	909	1	3.332	1.261	-12.425	347.600
14	910	1	3.275	1.261	-12.084	346.700
14	913	2	3.078	1.238	-11.043	343.800
14	914	2	3.022	1.238	-10.704	342.800
14	915	2	2.941	1.214	-10.361	341.700
14	916	2	2.886	1.214	-10.028	340.500
14	917	2	2.831	1.214	-9.697	339.300
14	918	3	2.699	1.139	-9.358	337.800
14	921	1	2.330	1.110	-7.318	338.300
14	921	2	2.225	1.006	-7.318	338.300
14	922	1	2.359	1.119	-7.443	341.300
14	927	1	2.428	1.081	-8.081	355.000
14	929	1	2.588	1.119	-8.813	356.600
14	930	3	2.679	1.151	-9.172	357.300
14	930	3	2.679	1.151	-9.172	357.300
14	931	3	2.701	1.127	-9.445	359.000
14	933	2	2.226	1.006	-7.323	359.400
14	934	2	2.165	1.006	-6.954	358.500
14	936	2	2.020	0.988	-6.189	356.900
14	939	2	1.695	0.864	-4.988	354.900
14	940	1	1.563	0.782	-4.683	353.400
14	942	1	1.347	0.710	-3.822	349.400
14	944	1	1.120	0.603	-3.101	344.000
14	945	1	1.024	0.565	-2.753	340.800
14	946	1	0.890	0.487	-2.421	336.300
14	947	3	0.780	0.435	-2.071	331.500
14	949	0	0.562	0.345	-1.306	328.100
14	950	0	0.482	0.327	-0.927	322.700
14	951	2	0.374	0.281	-0.561	327.100
14	952	0	0.171	0.142	-0.174	338.400
14	953	0	0.103	0.090	0.077	131.300
14	954	0	0.316	0.240	0.454	145.200
14	955	1	0.521	0.368	0.918	147.600
14	956	2	0.638	0.406	1.396	150.100
14	958	1	0.804	0.440	2.180	147.300
14	960	2	1.056	0.562	2.963	146.600
14	961	2	1.178	0.620	3.347	146.100
14	962	2	1.275	0.652	3.740	146.800
14	964	2	1.444	0.707	4.420	151.700
14	966	2	1.618	0.774	5.065	157.000
14	968	3	1.878	0.919	5.756	160.900
14	969	3	1.912	0.890	6.132	162.400
14	970	3	2.040	0.956	6.501	163.700
14	971	3	2.091	0.956	6.807	164.700
14	972	2	2.175	0.974	7.204	160.200
14	973	2	2.251	1.009	7.456	160.600
14	974	2	2.329	1.035	7.766	162.200
14	975	2	2.412	1.072	8.038	164.100
14	976	2	2.455	1.072	8.297	166.000
14	977	2	2.502	1.072	8.578	167.000
14	978	2	2.556	1.067	8.938	167.500
14	979	3	2.613	1.069	9.260	168.900
14	981	2	2.734	1.084	9.900	170.600
14	983	3	2.812	1.040	10.631	171.500
14	985	3	2.870	0.974	11.375	172.400
14	986	3	2.933	0.974	11.754	172.800
14	987	3	2.993	0.974	12.115	173.300
14	988	2	3.019	0.939	12.480	172.800
14	989	2	3.076	0.936	12.838	172.300
14	990	2	3.137	0.936	13.203	172.200
14	991	2	3.216	0.951	13.594	172.000
14	993	2	3.383	0.988	14.368	172.500
14	994	3	3.489	1.029	14.761	172.300
14	996	3	3.717	1.081	15.815	171.300
14	997	3	3.791	1.090	16.208	171.600
14	998	3	3.849	1.090	16.555	171.700
14	999	3	3.913	1.090	16.941	172.000

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
14	1000	3	3.980	1.090	17.339	172.100
14	1001	3	4.043	1.090	17.722	172.300
14	1002	3	4.138	1.119	18.116	172.500
14	1003	3	4.236	1.151	18.511	172.600
14	1004	3	4.305	1.151	18.929	172.800
14	1005	3	4.367	1.151	19.296	172.900
14	1007	2	4.478	1.130	20.086	173.200
14	1009	3	4.611	1.133	20.870	173.500
14	1011	3	4.740	1.130	21.656	173.700
14	1012	2	4.809	1.133	22.056	173.800
14	1013	2	4.870	1.130	22.440	173.900
14	1014	3	4.953	1.130	22.934	174.000
14	1015	2	5.009	1.130	23.274	174.100
14	1016	2	5.084	1.133	23.706	174.200
14	1017	2	5.127	1.113	24.084	174.300
14	1018	3	5.245	1.156	24.531	174.400
15	701	2	4.527	1.145	-20.294	347.200
15	903	3	4.586	1.096	-20.944	348.700
15	904	3	4.623	1.096	-21.163	349.600
15	907	3	4.361	1.032	-19.977	346.800
15	909	3	4.271	1.064	-19.245	346.200
15	910	3	4.244	1.093	-18.908	345.600
15	911	3	4.209	1.116	-18.556	345.000
15	912	3	4.152	1.116	-18.215	344.400
15	913	3	4.109	1.130	-17.873	343.800
15	914	3	4.061	1.139	-17.534	343.100
15	915	3	4.004	1.139	-17.189	342.500
15	916	3	3.948	1.139	-16.852	341.800
15	917	3	3.903	1.151	-16.516	341.100
15	918	2	3.883	1.188	-16.169	340.300
15	919	3	3.834	1.191	-15.858	339.500
15	921	3	3.500	1.145	-14.134	340.900
15	922	3	3.526	1.148	-14.270	342.400
15	927	2	3.598	1.124	-14.838	349.800
15	929	3	3.727	1.136	-15.545	350.900
15	930	3	3.790	1.142	-15.891	351.500
15	931	3	3.831	1.142	-16.133	352.500
15	932	3	3.828	1.093	-16.412	353.500
15	933	2	3.429	1.093	-14.019	351.800

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
15	934	2	3.394	1.116	-13.668	351.100
15	936	2	3.268	1.113	-12.932	350.000
15	939	3	3.076	1.116	-11.763	348.400
15	940	2	3.037	1.124	-11.473	347.600
15	942	2	2.883	1.110	-10.640	345.700
15	944	2	2.739	1.084	-9.932	343.700
15	945	2	2.689	1.093	-9.581	342.800
15	946	2	2.603	1.064	-9.237	341.700
15	947	2	2.541	1.064	-8.866	340.800
15	949	2	2.349	1.000	-8.096	341.200
15	950	3	2.292	1.009	-7.703	341.200
15	951	2	2.260	1.032	-7.370	342.400
15	952	2	2.208	1.040	-7.004	343.500
15	953	2	2.116	0.988	-6.766	344.000
15	954	2	2.000	0.933	-6.402	344.900
15	955	2	1.888	0.896	-5.954	346.100
15	956	2	1.780	0.867	-5.482	347.100
15	958	2	1.570	0.774	-4.777	351.000
15	960	2	1.458	0.777	-4.090	355.900
15	961	2	1.304	0.675	-3.775	359.100
15	962	2	1.206	0.635	-3.426	2.000
15	964	2	0.990	0.545	-2.669	3.700
15	966	3	0.768	0.452	-1.893	1.800
15	967	2	0.659	0.409	-1.500	0.400
15	968	3	0.551	0.365	-1.117	358.100
15	969	3	0.484	0.365	-0.713	354.700
15	970	2	0.089	0.035	-0.329	342.900
15	971	0	0.050	0.029	0.126	265.000
15	972	0	0.398	0.304	0.561	113.700
15	973	0	0.464	0.342	0.731	130.900
15	974	0	0.530	0.371	0.954	151.700
15	975	0	0.596	0.394	1.210	166.900
15	976	0	0.650	0.400	1.500	177.000
15	977	1	0.718	0.417	1.803	179.600
15	978	2	0.831	0.469	2.171	179.600
15	979	2	0.892	0.469	2.536	183.100
15	980	2	0.984	0.501	2.898	185.000
15	981	2	1.068	0.530	3.227	185.300
15	983	2	1.295	0.632	3.977	185.200
15	984	3	1.418	0.690	4.367	185.100

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
15	985	3	1.515	0.724	4.741	185.100
15	986	3	1.579	0.724	5.128	185.100
15	987	3	1.668	0.751	5.502	185.300
15	988	3	1.744	0.771	5.838	183.500
15	989	2	1.817	0.788	6.171	181.800
15	990	3	1.865	0.777	6.528	181.100
15	991	2	1.951	0.800	6.908	180.200
15	993	3	2.163	0.881	7.692	180.400
15	994	3	2.262	0.916	8.075	179.700
15	996	3	2.454	0.939	9.092	177.100
15	997	3	2.535	0.953	9.489	177.200
15	1000	3	2.772	1.000	10.631	177.600
15	1001	3	2.851	1.014	11.017	177.700
15	1002	3	2.917	1.014	11.414	177.700
15	1003	3	3.006	1.038	11.812	177.800
15	1004	3	3.076	1.038	12.233	177.900
15	1005	3	3.153	1.052	12.603	177.900
15	1007	3	3.320	1.087	13.398	178.000
15	1008	3	3.353	1.055	13.790	178.100
15	1009	3	3.419	1.055	14.187	178.200
15	1011	3	3.551	1.055	14.978	178.300
15	1012	3	3.592	1.029	15.380	178.300
15	1013	4	3.657	1.029	15.766	178.300
15	1014	4	3.739	1.029	16.263	178.400
15	1015	4	3.796	1.029	16.605	178.400
15	1016	4	3.868	1.029	17.038	178.500
15	1017	3	3.967	1.064	17.419	178.500
15	1018	3	4.042	1.064	17.868	178.600
16	701	3	6.137	1.139	-29.987	350.500
16	903	3	6.250	1.139	-30.664	351.400
16	904	3	6.289	1.139	-30.898	352.000
16	909	3	6.031	1.211	-28.918	350.000
16	910	3	5.961	1.200	-28.569	349.600
16	912	3	5.769	1.127	-27.849	348.900
16	913	3	5.709	1.127	-27.492	348.600
16	914	3	5.650	1.127	-27.138	348.200
16	915	3	5.590	1.127	-26.776	347.900
16	916	3	5.540	1.136	-26.421	347.500
16	919	3	5.395	1.168	-25.361	346.300
16	921	3	5.093	1.145	-23.692	347.600
16	922	3	5.123	1.145	-23.870	348.500
16	927	3	5.242	1.145	-24.583	352.800
16	930	3	5.415	1.139	-25.655	353.700
16	931	3	5.431	1.113	-25.908	354.300
16	932	3	5.479	1.113	-26.194	354.900
16	934	3	5.050	1.145	-23.431	353.700
16	936	2	4.882	1.101	-22.682	353.100
16	939	2	4.707	1.124	-21.494	352.400
16	940	2	4.645	1.113	-21.193	352.100
16	942	2	4.501	1.113	-20.331	351.300
16	944	2	4.369	1.104	-19.589	350.500
16	945	2	4.276	1.072	-19.221	350.200
16	946	3	4.215	1.072	-18.856	349.800
16	949	3	3.952	1.000	-17.716	350.000
16	950	2	3.940	1.052	-17.328	350.200
16	951	2	3.907	1.069	-17.023	350.900
16	952	2	3.879	1.098	-16.681	351.600
16	953	2	3.841	1.098	-16.453	351.900
16	954	2	3.783	1.098	-16.107	352.400
16	955	2	3.706	1.093	-15.679	353.100
16	956	2	3.627	1.090	-15.222	353.700
16	958	3	3.466	1.040	-14.553	355.300
16	960	2	3.355	1.040	-13.885	356.900
16	961	2	3.302	1.040	-13.570	357.800
16	962	2	3.205	1.003	-13.213	358.600
16	964	2	3.104	1.029	-12.452	358.700
16	966	2	2.982	1.035	-11.684	358.100
16	967	2	2.920	1.038	-11.294	357.700
16	968	2	2.885	1.067	-10.913	357.400
16	969	2	2.751	1.000	-10.508	357.200
16	970	2	2.686	1.000	-10.115	356.900
16	971	2	2.588	0.956	-9.791	356.600
16	972	1	2.532	0.939	-9.560	0.400
16	973	1	2.490	0.939	-9.307	0.600
16	974	1	2.421	0.930	-8.946	360.000
16	975	1	2.351	0.916	-8.609	358.800
16	976	1	2.298	0.916	-8.296	357.400
16	977	1	2.234	0.901	-7.995	356.800
16	978	1	2.178	0.907	-7.627	356.700

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
16	979	1	2.100	0.887	-7.278	355.300
16	980	1	2.014	0.858	-6.935	354.100
16	981	1	1.960	0.858	-6.616	353.400
16	983	1	1.780	0.800	-5.880	352.100
16	984	1	1.717	0.800	-5.500	351.200
16	985	1	1.633	0.777	-5.139	350.100
16	986	1	1.556	0.762	-4.764	349.000
16	987	1	1.515	0.780	-4.414	347.400
16	988	1	1.412	0.739	-4.040	348.400
16	989	1	1.352	0.739	-3.676	349.800
16	990	0	1.270	0.719	-3.311	349.800
16	991	0	1.164	0.678	-2.918	350.500
16	993	0	0.921	0.562	-2.154	346.400
16	994	0	0.803	0.510	-1.758	346.600
16	996	0	0.364	0.246	-0.705	0.300
16	997	0	0.216	0.165	-0.307	0.100
16	998	0	0.019	0.011	0.045	184.400
16	999	0	0.229	0.156	0.435	181.100
16	1000	0	0.412	0.272	0.836	180.100
16	1001	0	0.575	0.371	1.223	180.200
16	1002	0	0.777	0.507	1.620	180.000
16	1003	0	0.942	0.606	2.018	180.000
16	1004	0	1.073	0.667	2.440	180.000
16	1005	0	1.158	0.690	2.810	180.000
16	1007	0	1.380	0.780	3.605	180.000
16	1008	0	1.446	0.780	3.997	180.000
16	1009	2	1.512	0.780	4.395	180.000
16	1011	2	1.722	0.858	5.186	180.100
16	1012	2	1.682	0.751	5.588	180.000
16	1013	2	1.798	0.803	5.974	179.900
16	1015	1	1.959	0.823	6.814	180.000
16	1017	1	2.129	0.858	7.628	180.000
16	1018	1	2.245	0.898	8.077	180.000

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
17	701	2	7.388	1.078	-37.859	352.400
17	903	3	7.486	1.061	-38.552	353.100
17	904	2	7.515	1.049	-38.793	353.500
17	907	3	7.307	1.052	-37.531	352.200
17	909	3	7.197	1.067	-36.782	352.000
17	910	3	7.108	1.038	-36.425	351.700
17	912	3	6.998	1.049	-35.694	351.300
17	913	3	6.949	1.061	-35.329	351.000
17	914	3	6.889	1.061	-34.968	350.800
17	915	2	6.856	1.090	-34.600	350.500
17	916	2	6.802	1.096	-34.237	350.300
17	918	2	6.710	1.127	-33.494	349.700
17	919	2	6.687	1.162	-33.150	349.400
17	921	3	6.380	1.127	-31.513	350.600
17	922	3	6.424	1.139	-31.709	351.200
17	926	2	6.516	1.148	-32.209	354.000
17	927	2	6.537	1.122	-32.492	354.400
17	929	3	6.690	1.153	-33.219	354.900
17	930	2	6.752	1.156	-33.574	355.100
17	931	2	6.769	1.130	-33.833	355.600
17	932	2	6.815	1.127	-34.124	356.000
17	933	2	6.401	1.116	-31.712	355.400
17	934	3	6.344	1.119	-31.350	355.200
17	936	3	6.227	1.127	-30.595	354.800
17	939	1	5.998	1.098	-29.400	354.400
17	940	1	5.947	1.098	-29.094	354.100
17	942	2	5.793	1.090	-28.222	353.600
17	944	2	5.682	1.104	-27.469	353.100
17	945	2	5.612	1.096	-27.096	352.900
17	946	2	5.524	1.069	-26.725	352.600
17	949	2	5.294	1.029	-25.590	353.000
17	950	2	5.265	1.064	-25.206	353.100
17	951	2	5.230	1.078	-24.912	353.700
17	952	2	5.189	1.093	-24.579	354.100
17	953	1	5.175	1.116	-24.355	354.400
17	954	1	5.116	1.113	-24.016	354.800
17	955	1	5.045	1.113	-23.595	355.200
17	956	1	4.970	1.113	-23.144	355.700
17	958	2	4.829	1.081	-22.489	356.800
17	960	2	4.641	1.003	-21.830	357.900

FIRST-ARRIVAL TIMES: NORTH-SOUTH PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
17	961	2	4.589	1.003	-21.517	358.500
17	962	2	4.521	0.994	-21.162	358.900
17	964	2	4.435	1.035	-20.401	359.000
17	966	2	4.304	1.032	-19.632	358.600
17	967	2	4.239	1.032	-19.242	358.500
17	968	2	4.207	1.064	-18.859	358.300
17	969	2	4.139	1.064	-18.454	358.200
17	970	3	4.033	1.023	-18.060	358.000
17	971	2	3.979	1.023	-17.735	357.900
17	972	2	3.918	1.000	-17.509	360.000
17	973	2	3.876	1.000	-17.256	0.100
17	974	2	3.827	1.011	-16.895	359.800
17	975	2	3.760	1.000	-16.558	359.100
17	976	2	3.721	1.014	-16.243	358.400
17	977	3	3.741	1.084	-15.940	358.200
17	978	3	3.584	0.988	-15.572	358.100
17	979	2	3.524	0.988	-15.217	357.500
17	980	2	3.460	0.982	-14.868	357.000
17	981	2	3.404	0.980	-14.545	356.800
17	983	2	3.248	0.948	-13.801	356.300
17	984	2	3.178	0.942	-13.416	356.100
17	985	2	3.090	0.916	-13.047	355.800
17	986	3	3.006	0.896	-12.664	355.600
17	987	2	3.001	0.951	-12.300	355.200
17	988	2	2.906	0.916	-11.940	355.800
17	989	2	2.836	0.904	-11.589	356.400
17	990	2	2.761	0.890	-11.227	356.700
17	991	2	2.673	0.867	-10.841	357.100
17	993	2	2.529	0.852	-10.059	356.700
17	994	0	2.447	0.835	-9.672	357.200
17	996	1	2.294	0.852	-8.654	359.600
17	997	1	2.237	0.861	-8.256	359.500
17	998	1	2.204	0.887	-7.905	359.500
17	999	0	2.128	0.875	-7.515	359.400
17	1000	0	2.041	0.855	-7.114	359.400
17	1001	1	1.927	0.806	-6.727	359.400
17	1002	0	1.849	0.794	-6.330	359.400
17	1003	0	1.774	0.785	-5.932	359.300
17	1005	0	1.590	0.733	-5.140	359.200
17	1007	0	1.376	0.652	-4.345	359.100
17	1009	0	1.187	0.594	-3.555	358.900
17	1011	0	0.988	0.527	-2.764	358.400
17	1012	0	0.921	0.527	-2.363	358.300
17	1013	0	0.851	0.522	-1.976	358.200
17	1015	0	0.616	0.426	-1.138	356.300
17	1017	0	0.243	0.188	-0.329	347.700
17	1018	0	0.106	0.081	0.148	210.300

FIRST-ARRIVAL TIMES: EAST-WEST PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
12	701	0	0.024	0.003	-0.126	51.500
12	703	2	0.494	0.368	-0.755	328.200
12	704	4	0.662	0.475	-1.123	323.200
12	705	0	0.766	0.513	-1.520	321.100
12	708	0	1.045	0.629	-2.497	303.700
12	709	0	1.114	0.658	-2.738	297.700
12	710	1	1.205	0.701	-3.024	292.600
12	714	2	1.591	0.849	-4.452	284.800
12	716	0	1.793	0.927	-5.196	281.600
12	717	1	1.863	0.936	-5.560	279.300
12	718	1	1.932	0.956	-5.854	277.100
12	719	1	2.025	0.985	-6.240	277.000
12	720	1	2.086	0.985	-6.603	275.700
12	721	1	2.073	0.916	-6.945	274.000
12	722	1	2.108	0.907	-7.205	272.200
12	723	1	2.069	0.861	-7.249	269.100
12	725	2	2.105	0.809	-7.779	264.800
12	726	2	2.129	0.791	-8.027	262.800
12	727	2	2.165	0.791	-8.243	260.600
12	728	1	2.215	0.791	-8.546	259.000
12	729	1	2.275	0.788	-8.922	258.200
12	730	2	2.342	0.788	-9.321	257.600
12	731	2	2.378	0.768	-9.658	256.100
12	734	2	2.478	0.722	-10.536	252.000
12	735	2	2.542	0.722	-10.921	251.300
12	736	2	2.588	0.698	-11.337	252.000
12	739	3	2.857	0.785	-12.432	251.700
12	742	3	2.997	0.748	-13.493	256.200
12	743	3	3.046	0.748	-13.793	257.600
12	744	2	2.974	0.620	-14.120	258.300
12	745	3	2.980	0.562	-14.509	258.700
12	746	3	3.017	0.533	-14.906	258.600
12	749	2	3.384	0.698	-16.114	258.600
12	750	2	3.433	0.681	-16.513	258.600
12	751	3	3.494	0.675	-16.913	258.600
12	752	2	3.645	0.655	-17.939	256.000
12	754	2	3.755	0.655	-18.598	257.400
12	756	2	3.895	0.655	-19.440	257.100
12	757	2	3.943	0.655	-19.729	257.000
12	759	2	4.175	0.777	-20.390	258.200
12	760	2	4.225	0.748	-20.865	258.400
12	761	2	4.252	0.745	-21.044	259.200
12	763	2	4.379	0.745	-21.806	260.100
12	765	2	4.493	0.745	-22.492	259.900
12	766	2	4.562	0.730	-22.988	259.900
12	767	3	4.607	0.719	-23.328	260.400
12	768	2	4.684	0.745	-23.637	261.000
12	769	2	4.739	0.745	-23.965	261.600
12	770	2	4.808	0.751	-24.345	261.700
12	771	2	4.880	0.756	-24.741	261.700
12	772	1	4.986	0.797	-25.136	261.600
12	774	1	5.103	0.785	-25.907	262.000
12	775	1	5.178	0.800	-26.270	262.200
12	776	1	5.241	0.800	-26.649	262.500
12	777	1	5.305	0.800	-27.031	262.700
12	778	1	5.358	0.791	-27.402	262.900
12	779	1	5.420	0.794	-27.758	263.300
12	780	1	5.483	0.800	-28.097	263.500
12	781	1	5.532	0.742	-28.738	263.800
12	782	1	5.581	0.727	-29.124	264.000
12	783	1	5.666	0.745	-29.525	264.100
12	784	2	5.761	0.780	-29.888	263.800
12	785	3	5.800	0.759	-30.247	264.000
12	786	2	5.895	0.794	-30.608	264.400
12	787	2	5.938	0.777	-30.968	264.600
12	788	2	6.027	0.806	-31.328	264.800
12	789	2	6.089	0.820	-31.614	265.300
12	790	2	6.145	0.809	-32.016	265.600
12	791	2	6.196	0.791	-32.430	265.700
12	793	1	6.549	1.017	-33.191	255.800
12	794	2	6.685	1.011	-34.040	256.000
12	795	2	6.801	0.985	-34.897	256.300
12	796	2	6.893	0.965	-35.568	256.700
12	797	1	7.064	0.948	-36.699	255.200
12	798	1	7.180	0.948	-37.397	254.800
12	799	1	7.295	0.867	-38.573	254.000

FIRST-ARRIVAL TIMES: EAST-WEST PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
12	800	2	7.438	0.869	-39.413	254.200
12	801	1	7.658	0.916	-40.453	254.900
12	803	1	7.909	0.849	-42.357	255.600
12	804	2	8.016	0.849	-43.003	257.000
12	807	1	8.629	0.945	-46.103	260.200
12	809	2	8.765	0.777	-47.927	259.200
12	810	2	8.985	0.794	-49.144	258.400
12	811	3	9.097	0.768	-49.975	258.000
12	812	2	9.261	0.780	-50.888	258.300
12	813	3	9.381	0.751	-51.784	258.000
12	816	3	9.810	0.751	-54.354	258.300
12	817	3	9.991	0.751	-55.443	258.600
12	818	3	10.114	0.698	-56.491	257.600
12	819	3	10.272	0.736	-57.213	256.800
12	820	4	10.605	0.753	-57.107	258.200
18	701	0	3.281	0.707	15.442	79.100
18	705	0	3.095	0.649	14.672	74.100
18	708	1	2.890	0.614	13.655	72.000
18	709	1	2.812	0.597	13.293	72.000
18	710	1	2.748	0.597	12.909	72.000
18	714	1	2.413	0.501	11.471	69.700
18	716	1	2.244	0.461	10.701	68.800
18	717	1	2.142	0.429	10.282	68.700
18	718	1	2.064	0.411	9.917	69.000
18	719	1	2.001	0.406	9.571	68.000
18	720	1	1.919	0.388	9.186	67.600
18	721	1	1.853	0.388	8.787	67.800
18	723	2	1.722	0.342	8.278	70.800
18	725	2	1.618	0.348	7.623	73.700
18	727	2	1.489	0.307	7.091	77.900
18	728	2	1.421	0.290	6.785	79.800
18	729	1	1.359	0.290	6.413	81.000
18	730	1	1.305	0.301	6.020	82.000
18	731	1	1.239	0.287	5.715	84.900
18	735	1	0.991	0.197	4.766	97.900
18	736	1	0.931	0.209	4.335	98.800
18	739	1	0.770	0.197	3.437	108.200
18	742	0	0.478	0.145	1.997	100.900
18	743	0	0.377	0.110	1.604	94.900
18	744	0	0.276	0.069	1.237	90.800
18	745	0	0.198	0.058	0.841	91.100
18	746	0	0.115	0.038	0.467	103.600
18	749	0	0.196	0.061	-0.811	244.000
18	750	0	0.270	0.069	-1.201	248.800
18	751	0	0.364	0.098	-1.596	251.400
18	752	0	0.545	0.081	-2.785	237.000
18	754	0	0.674	0.122	-3.317	248.300
18	755	0	0.739	0.113	-3.757	249.900
18	756	0	0.827	0.133	-4.164	248.800
18	757	0	0.896	0.153	-4.453	249.100
18	758	0	1.005	0.203	-4.814	251.800
18	759	0	1.063	0.217	-5.072	254.700
18	760	0	1.124	0.200	-5.542	255.900
18	761	0	1.170	0.217	-5.714	258.700
18	762	0	1.204	0.191	-6.080	260.200
18	763	0	1.315	0.235	-6.481	261.900
18	765	0	1.429	0.235	-7.164	261.000
18	766	0	1.520	0.243	-7.659	260.900
18	767	0	1.583	0.249	-8.005	262.400
18	769	0	1.688	0.243	-8.667	265.500
18	770	0	1.755	0.246	-9.051	265.800
18	771	0	1.823	0.249	-9.445	265.500
18	772	1	1.888	0.249	-9.836	265.100
18	774	0	2.045	0.275	-10.619	265.900
18	775	0	2.104	0.272	-10.987	266.300
18	776	0	2.168	0.272	-11.373	266.600
18	777	0	2.230	0.269	-11.764	267.100
18	778	0	2.290	0.267	-12.141	267.500
18	779	0	2.360	0.275	-12.509	268.100
18	780	0	2.418	0.275	-12.858	268.500
18	781	0	2.510	0.258	-13.510	268.900
18	782	0	2.572	0.255	-13.902	269.200
18	783	0	2.639	0.255	-14.306	269.200
18	784	0	2.738	0.296	-14.655	268.500
18	785	0	2.814	0.310	-15.023	268.800

FIRST-ARRIVAL TIMES: EAST-WEST PROFILE

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
18	786	0	2.885	0.319	-15.398	269.400
18	787	0	2.953	0.324	-15.770	269.800
18	788	0	3.046	0.356	-16.137	270.000
18	789	0	3.095	0.353	-16.448	270.900
18	790	0	3.164	0.353	-16.862	271.200
18	791	0	3.233	0.353	-17.279	271.300
18	793	0	3.519	0.533	-17.913	252.800
18	794	0	3.665	0.539	-18.756	253.200
18	795	0	3.792	0.524	-19.603	253.900
18	796	0	3.890	0.513	-20.265	254.700
18	797	0	4.059	0.487	-21.434	252.200
18	798	0	4.181	0.490	-22.146	251.600
18	800	0	4.497	0.467	-24.180	250.900
18	801	0	4.689	0.490	-25.193	252.200
18	803	0	4.915	0.403	-27.074	253.600
18	804	0	5.001	0.385	-27.692	255.600
18	805	1	5.103	0.336	-28.604	257.100
18	807	1	5.465	0.336	-30.776	260.700
18	809	1	5.769	0.336	-32.597	259.200
18	810	1	6.015	0.380	-33.815	258.000
18	811	1	6.082	0.307	-34.649	257.500
18	812	1	6.205	0.278	-35.560	257.800
18	813	1	6.355	0.278	-36.458	257.400
18	814	1	6.507	0.293	-37.288	257.300
18	816	1	6.762	0.258	-39.026	257.900
18	817	1	6.923	0.238	-40.114	258.300
18	818	1	7.322	0.461	-41.169	256.900
18	819	1	7.485	0.501	-41.901	255.900
18	820	1	7.798	0.501	-43.779	257.800

Shotpoint Number	Location Number	Weight	Real Time (sec)	Reduced Time (T-x/6)	Distance	Azimuth
19	701	0	5.470	0.724	28.476	82.700
19	704	0	5.331	0.693	27.828	80.800
19	705	0	5.292	0.693	27.598	80.100
19	708	1	5.067	0.646	26.527	79.300
19	709	1	4.976	0.614	26.168	79.400
19	710	1	4.912	0.614	25.786	79.500
19	714	1	4.559	0.510	24.295	78.900
19	716	1	4.404	0.487	23.505	78.800
19	717	1	4.306	0.458	23.089	78.900
19	718	1	4.245	0.455	22.739	79.200
19	719	1	4.183	0.455	22.367	78.900
19	720	1	4.057	0.394	21.979	79.000
19	721	2	3.993	0.394	21.594	79.300
19	722	2	3.957	0.409	21.289	79.700
19	723	1	3.915	0.385	21.177	80.700
19	726	3	3.773	0.382	20.341	82.800
19	726	2	3.773	0.382	20.341	82.800
19	727	2	3.727	0.371	20.135	83.700
19	728	1	3.676	0.368	19.851	84.500
19	729	1	3.599	0.351	19.490	85.000
19	730	1	3.552	0.368	19.106	85.400
19	731	1	3.524	0.388	18.814	86.300
19	735	0	3.297	0.330	17.803	89.800
19	736	0	3.219	0.324	17.366	89.900
19	739	0	3.050	0.324	16.353	91.300
19	742	0	2.815	0.307	15.047	88.700
19	743	0	2.735	0.287	14.691	87.800
19	744	0	2.664	0.275	14.336	87.200
19	745	0	2.567	0.243	13.940	87.200
19	746	0	2.502	0.243	13.549	87.500
19	749	0	2.294	0.235	12.359	88.400
19	750	0	2.209	0.214	11.965	88.700
19	751	0	2.149	0.220	11.571	89.000
19	752	0	2.002	0.206	10.777	94.300
19	754	0	1.875	0.206	10.013	93.000
19	778	0	0.254	0.093	0.968	79.800
19	779	0	0.250	0.142	0.649	63.300

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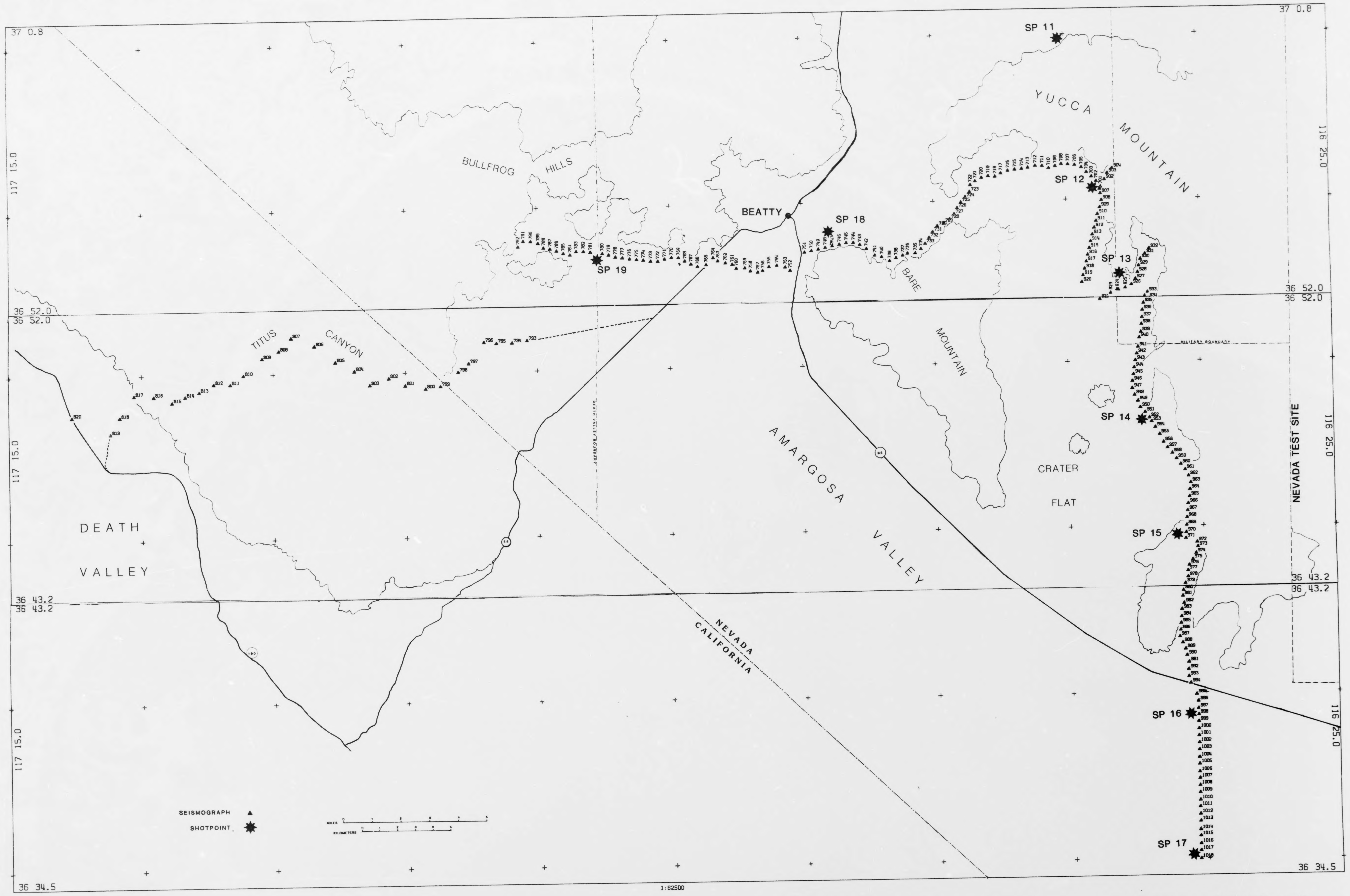

MAP OF YUCCA MOUNTAIN, BEATTY, AND VICINITY, SOUTHWESTERN NEVADA

WITH SHOTPOINTS AND NUMBERED RECORDER SITE LOCATIONS

by Vickie D. Sutton
1984

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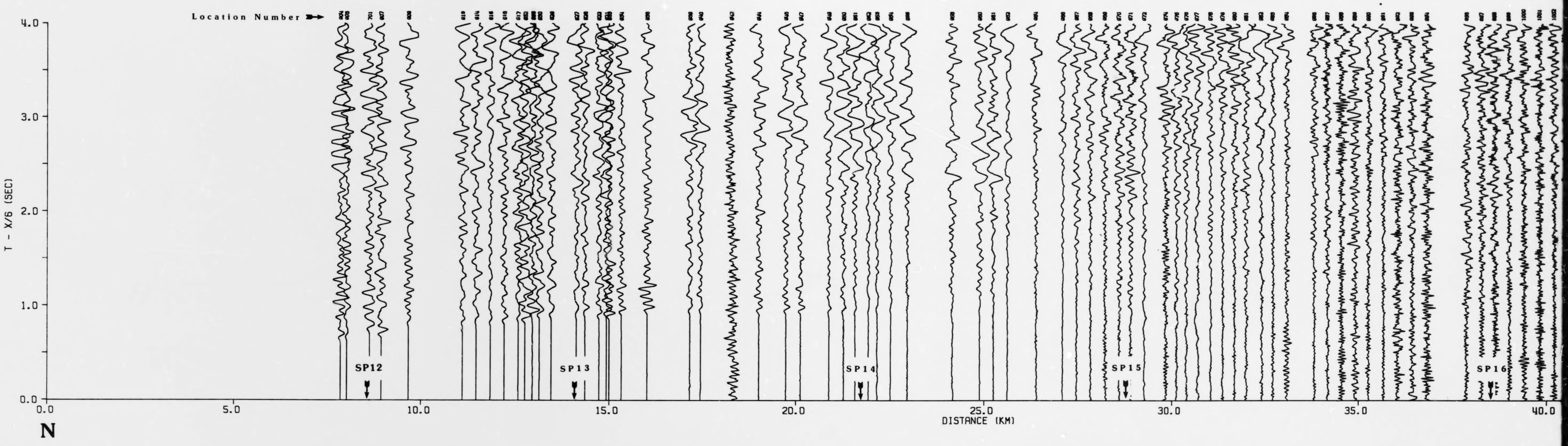

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NORTH-SOUTH PROFILE - SHOTPOINT 11

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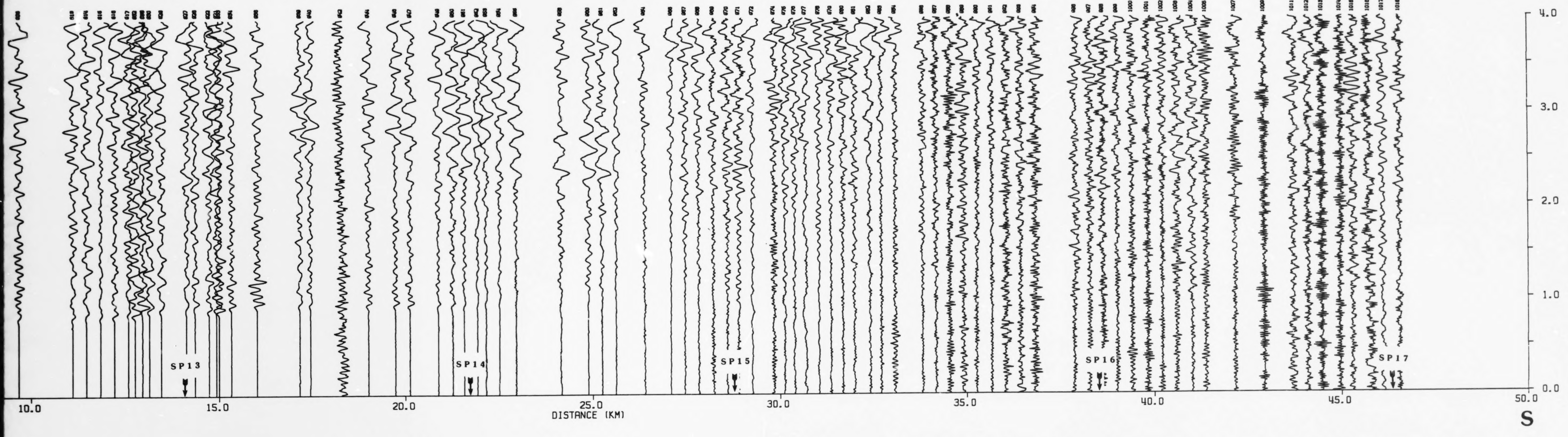

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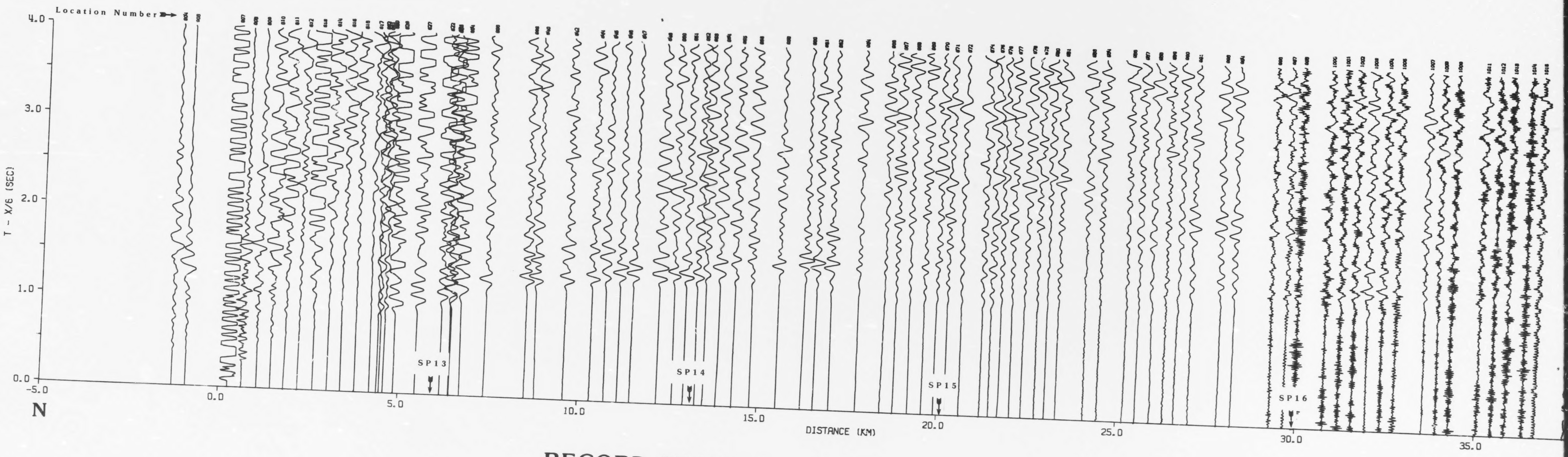

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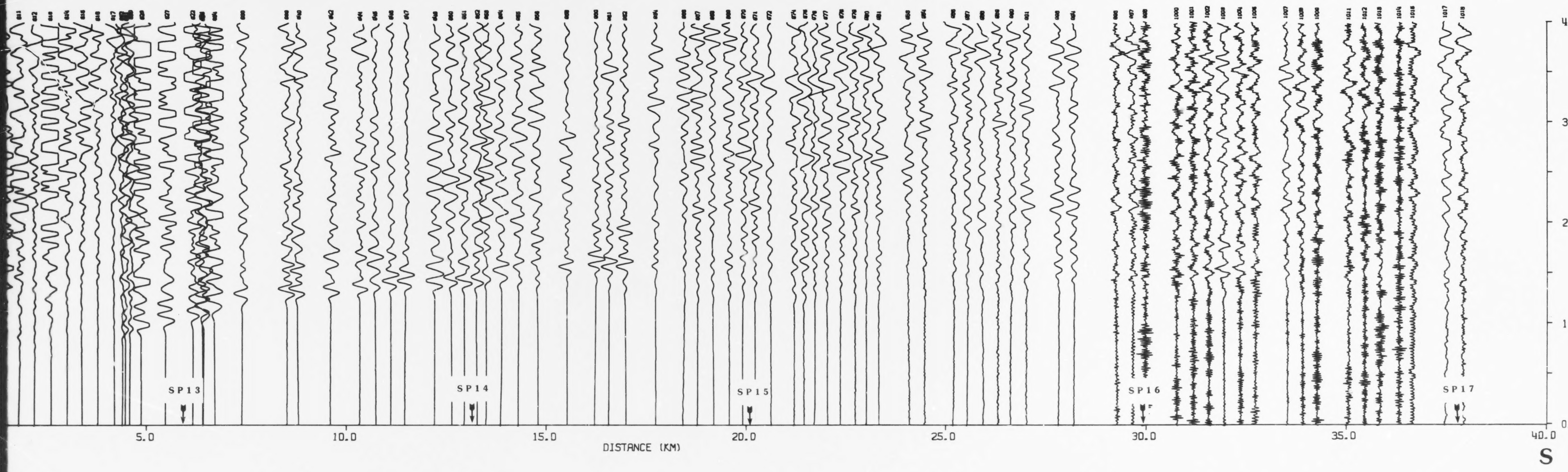

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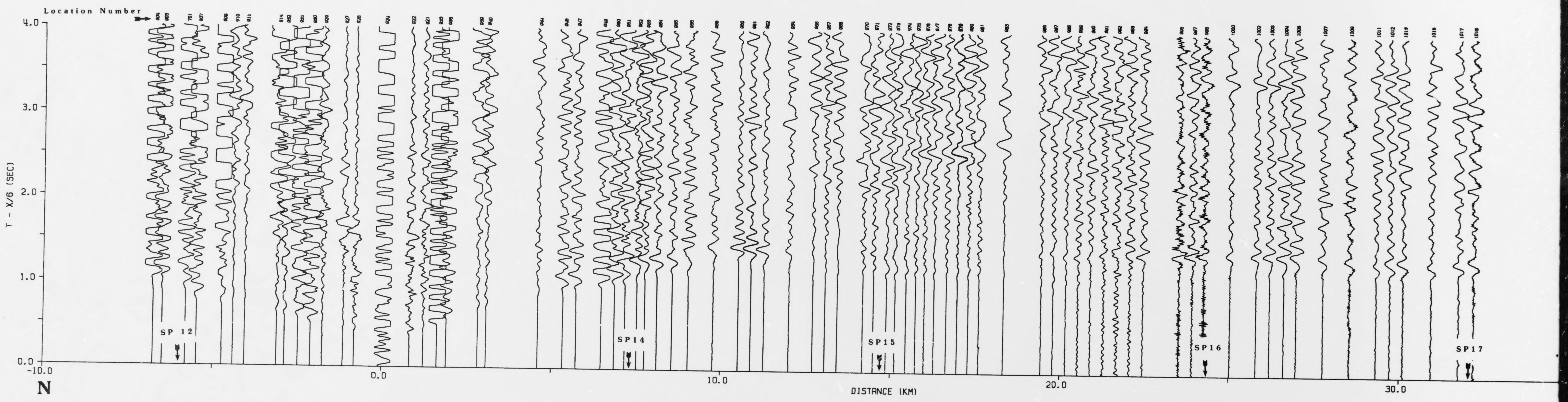

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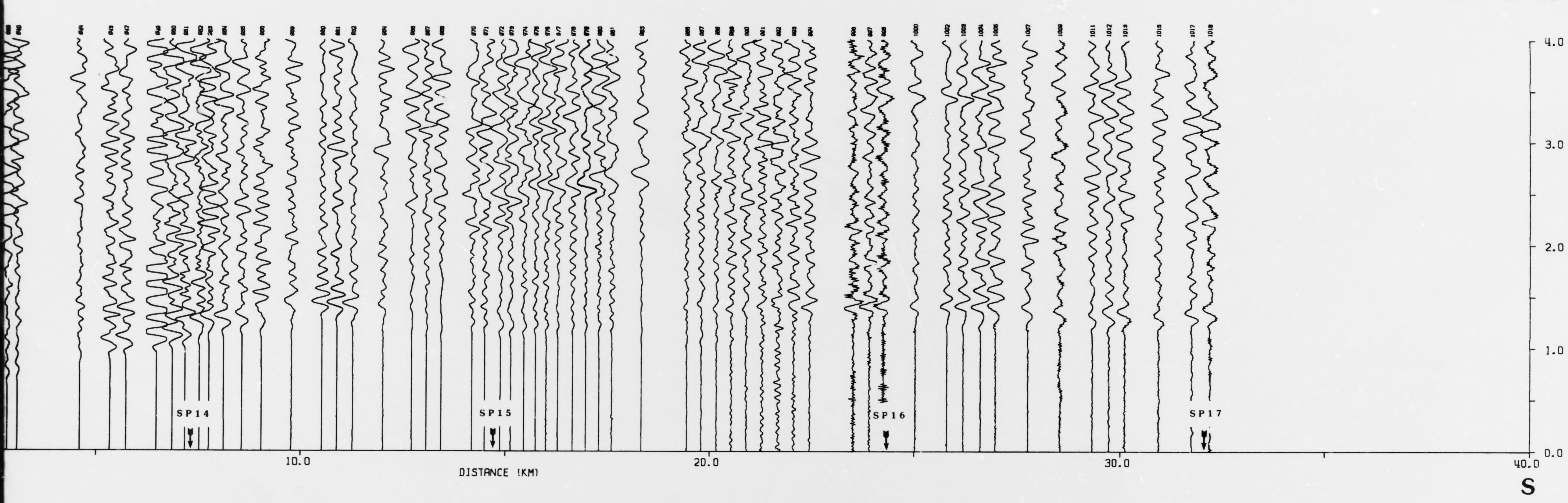

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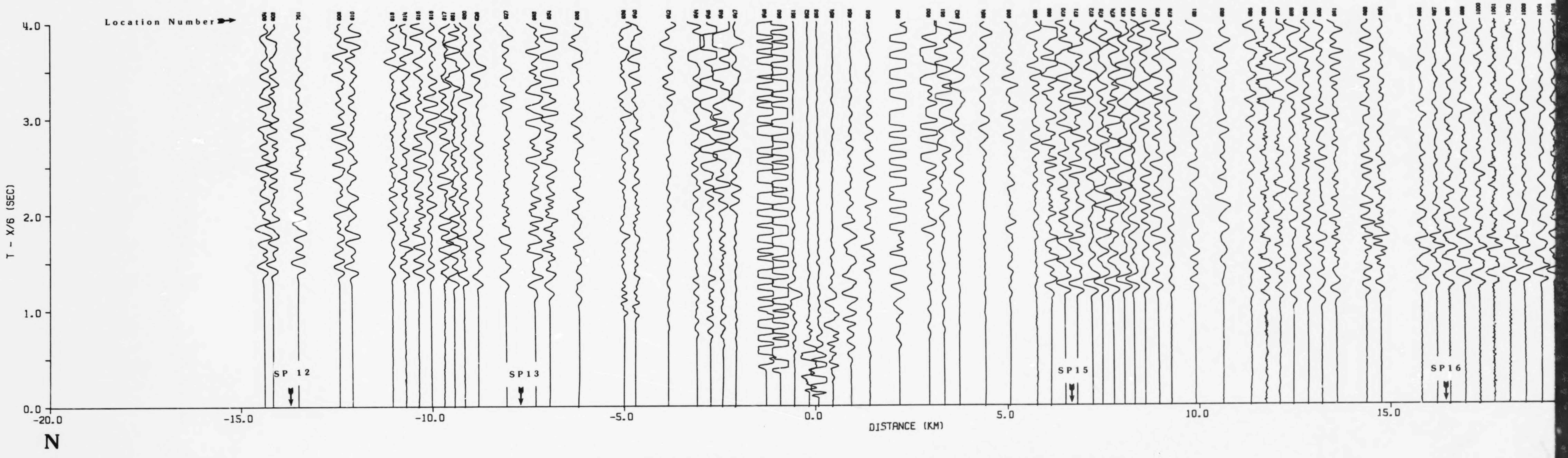

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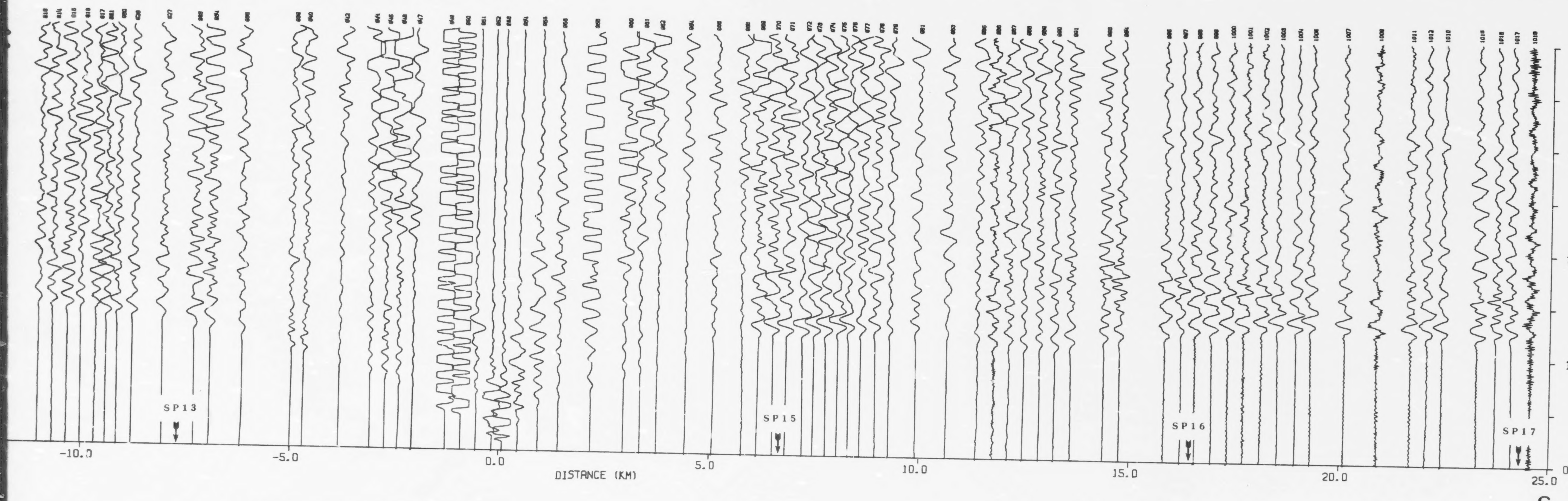

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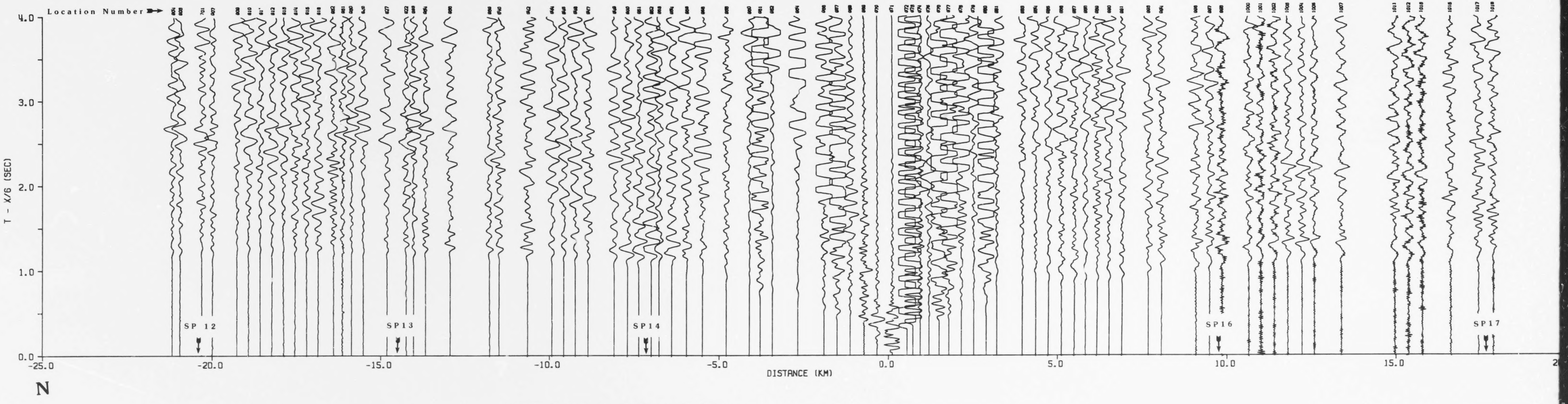

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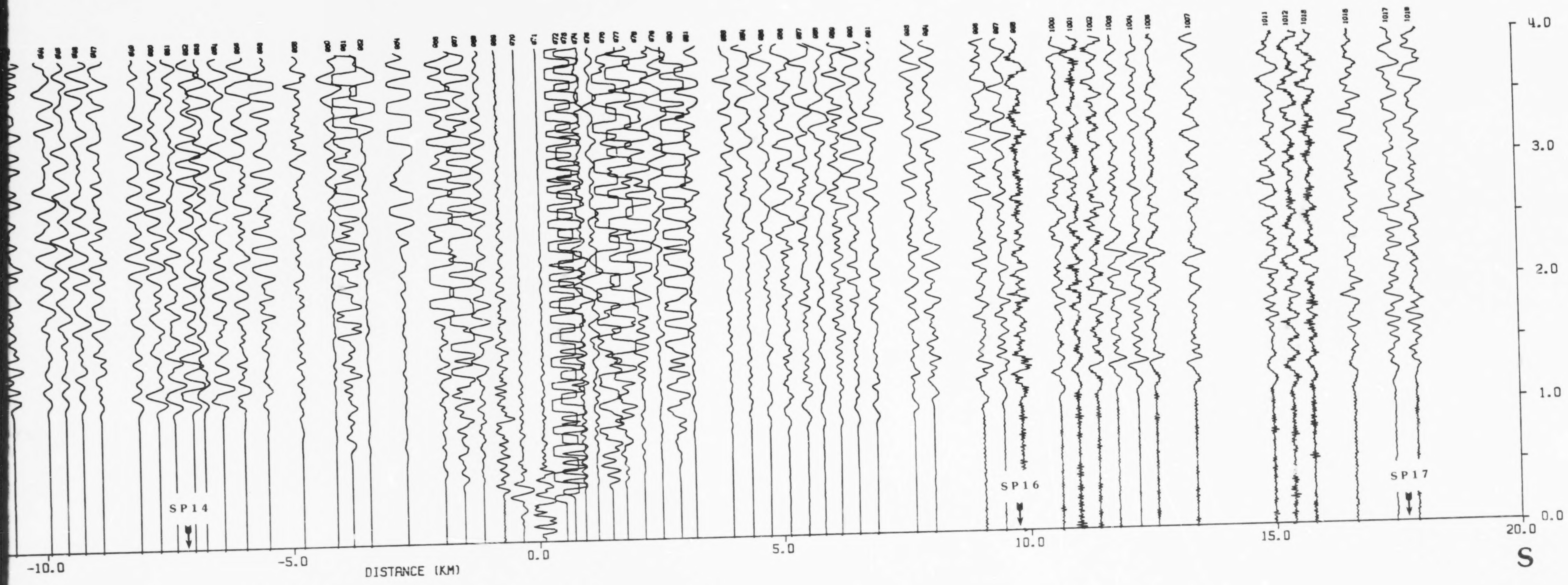

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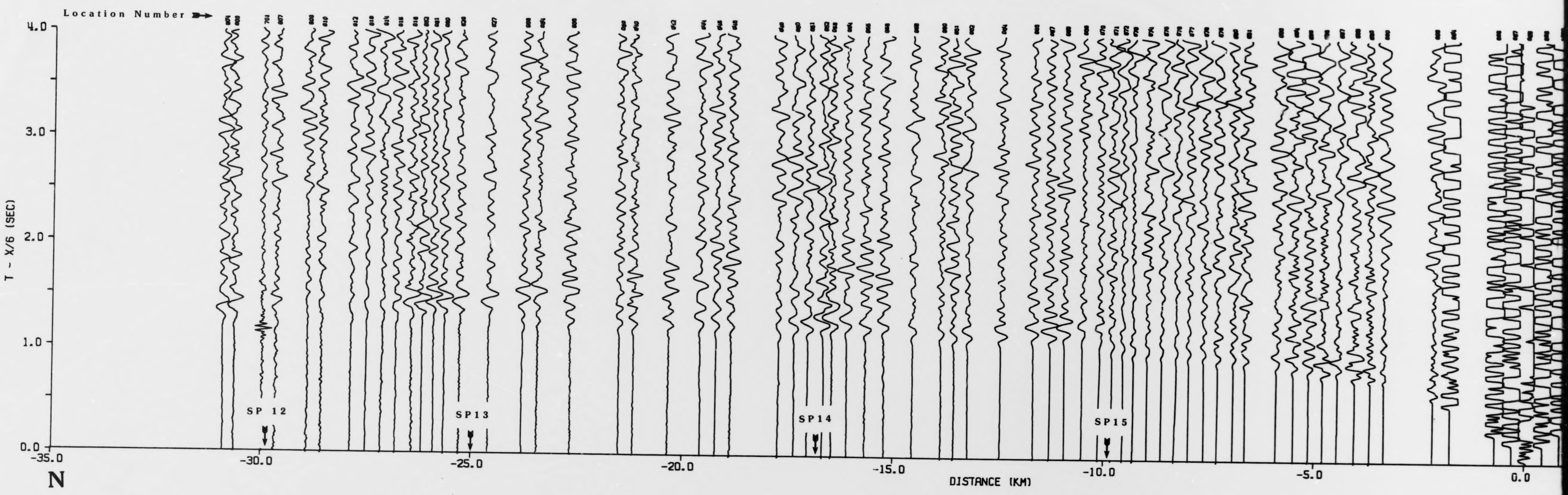

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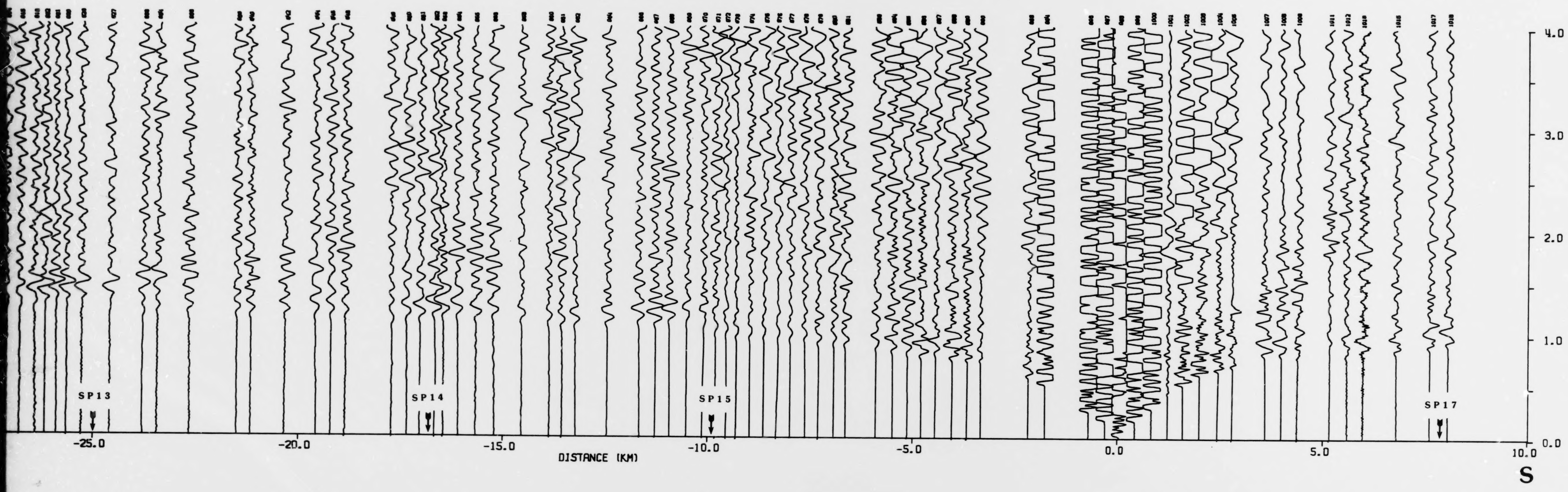

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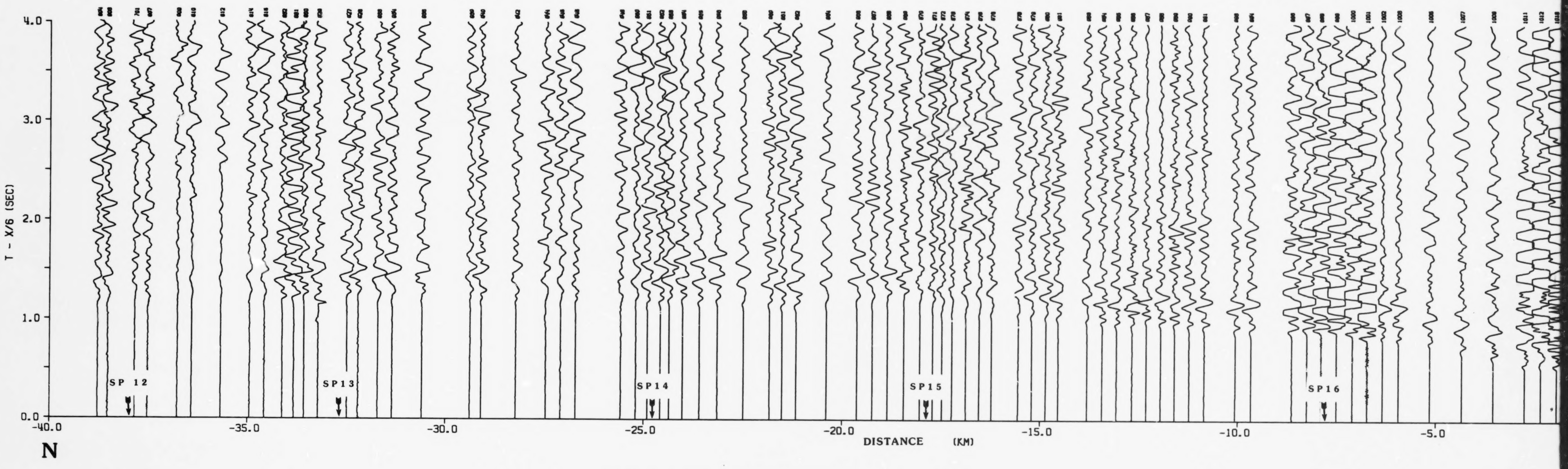

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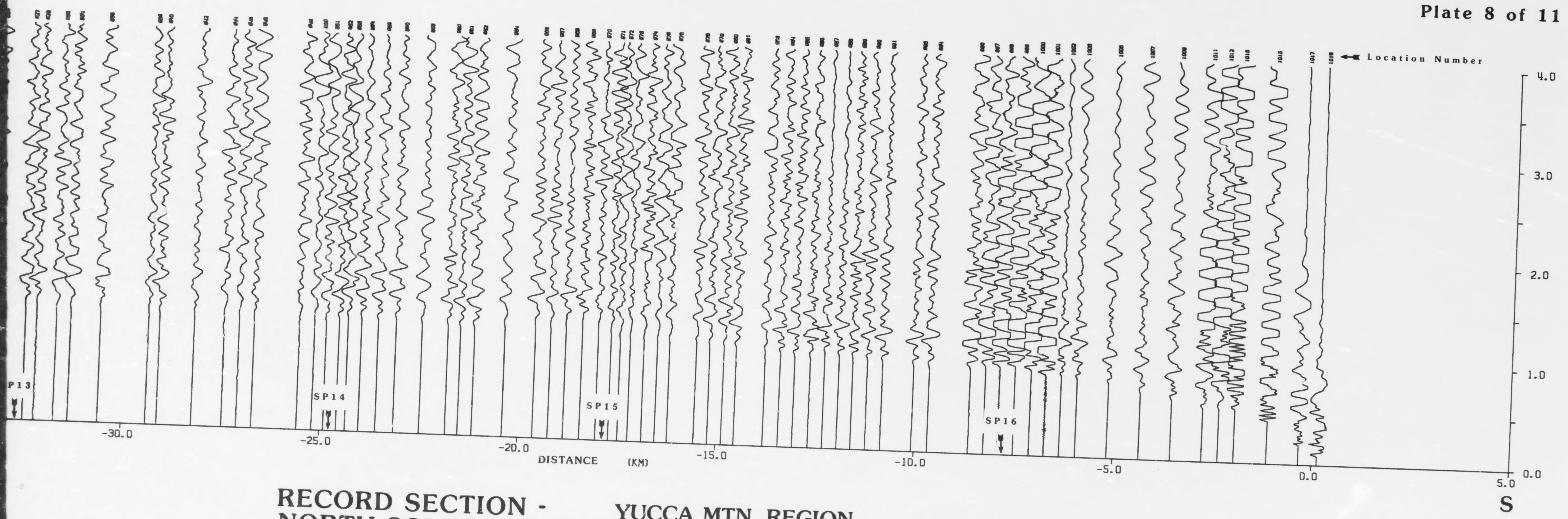

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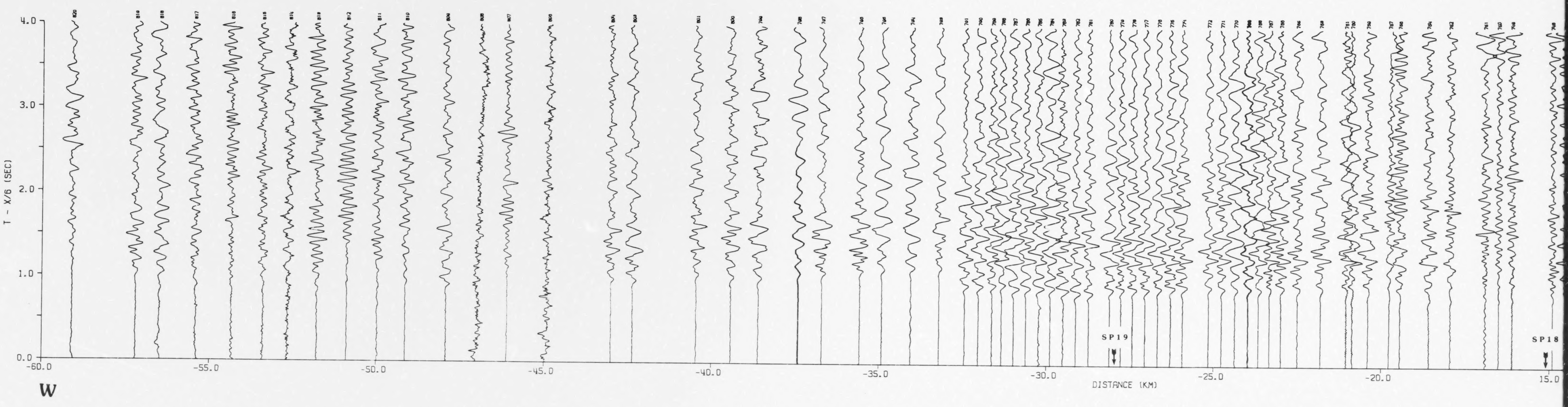

RECORD SECTION - BEATTY, NEV. REGION
EAST-WEST PROFILE - SHOTPOINT 12

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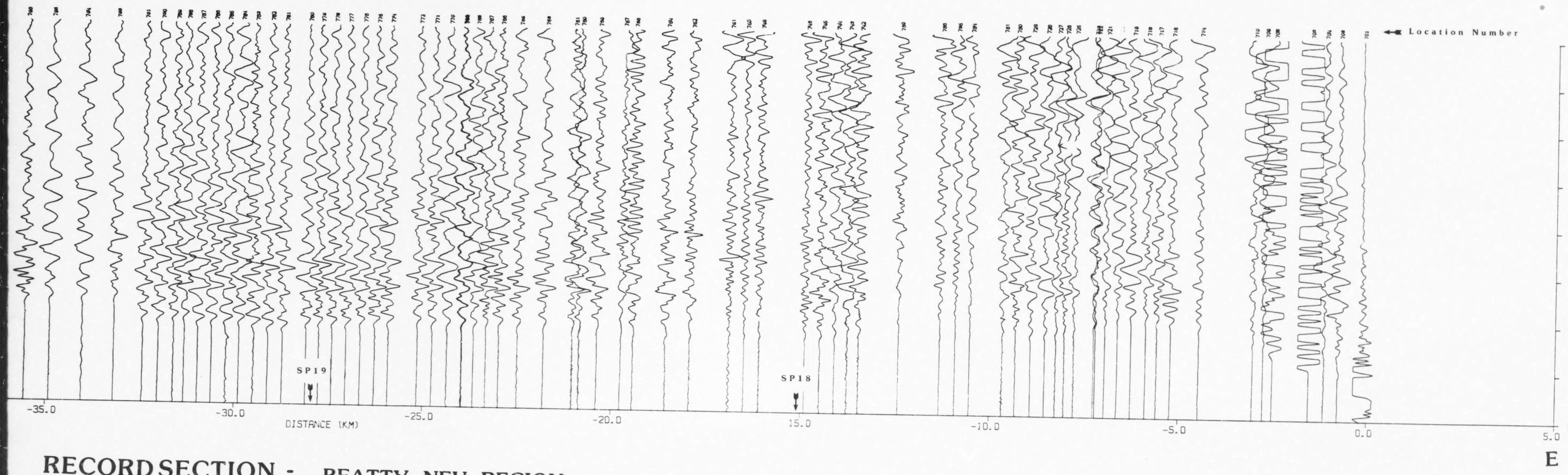

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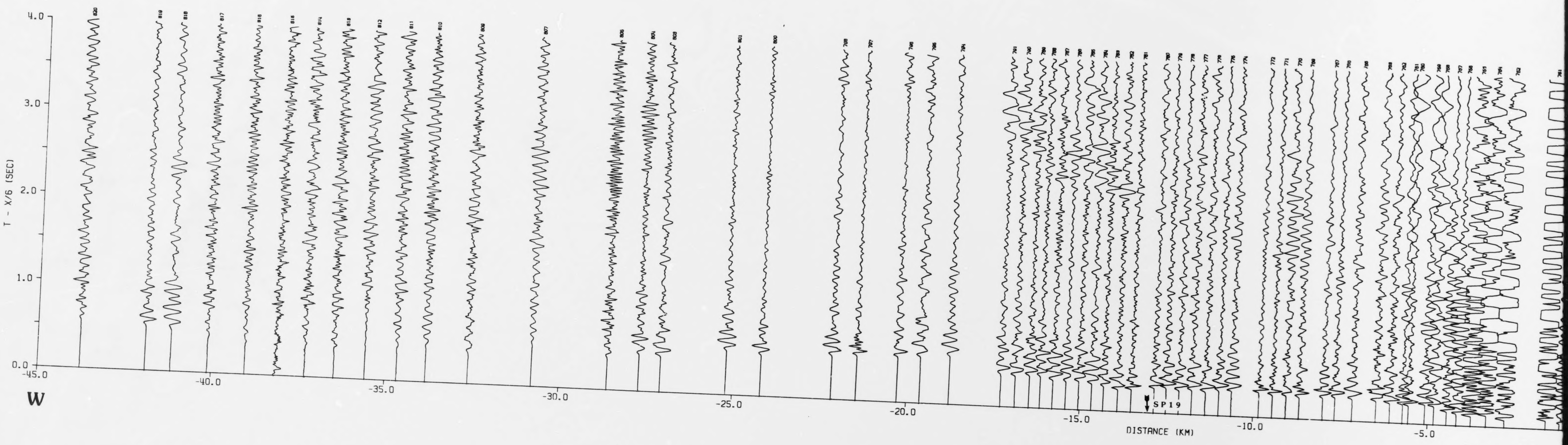

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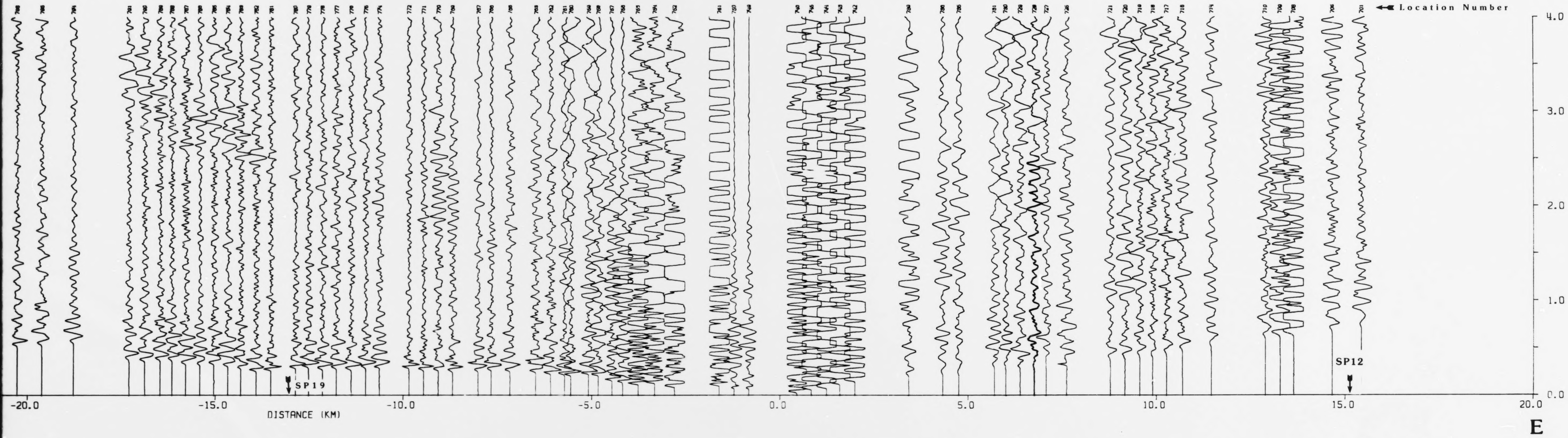

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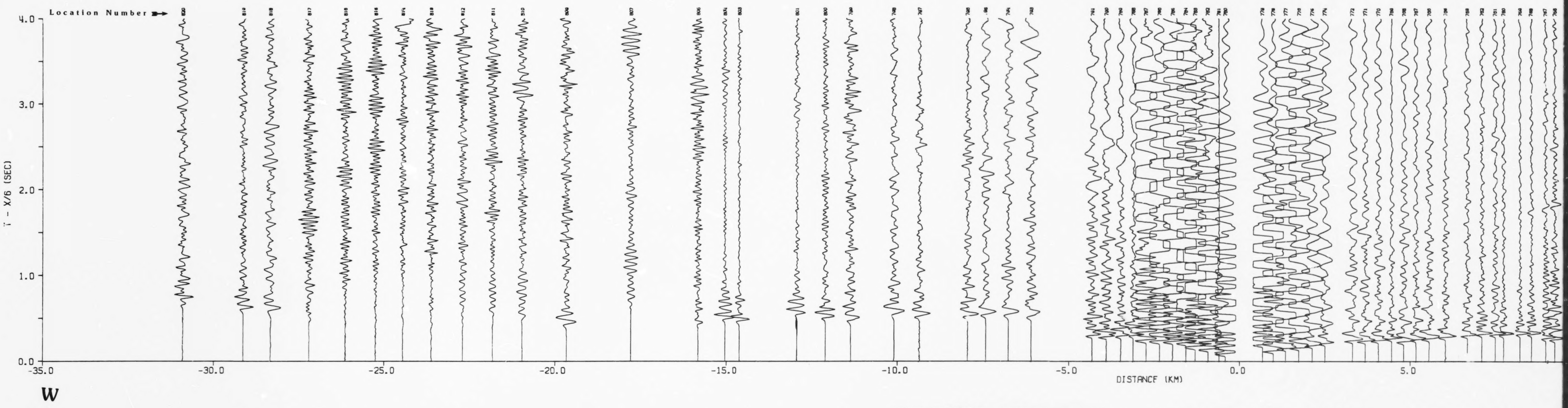

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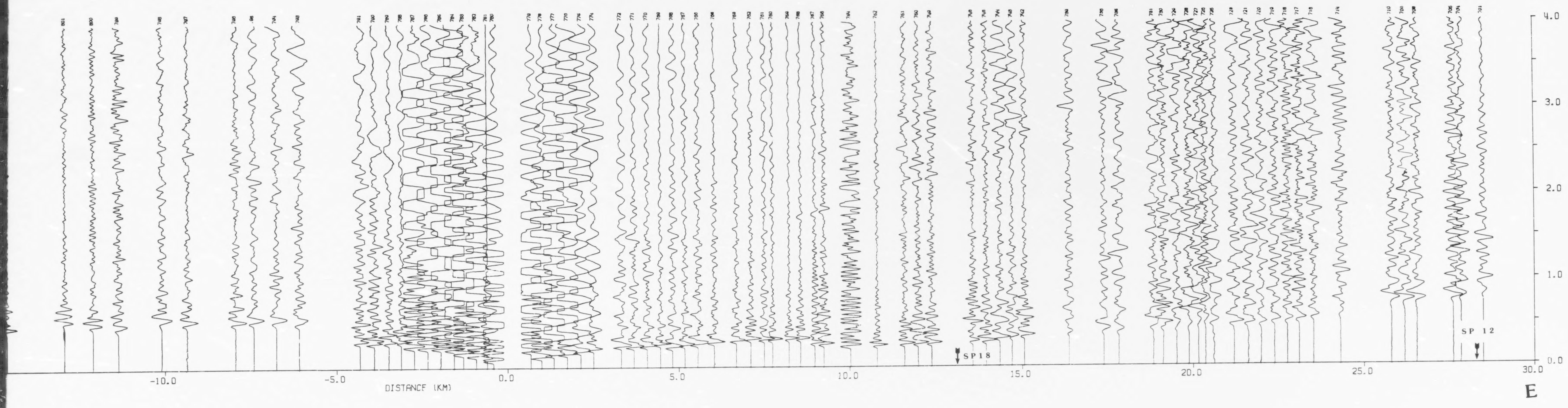

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